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Title: METHODS, SYSTEMS AND COMPUTER  
PROGRAM PRODUCTS FOR  
MONITORING PROTOCOL RESPONSES  
FOR A SERVER APPLICATION  
Atty Docket: 1503/9

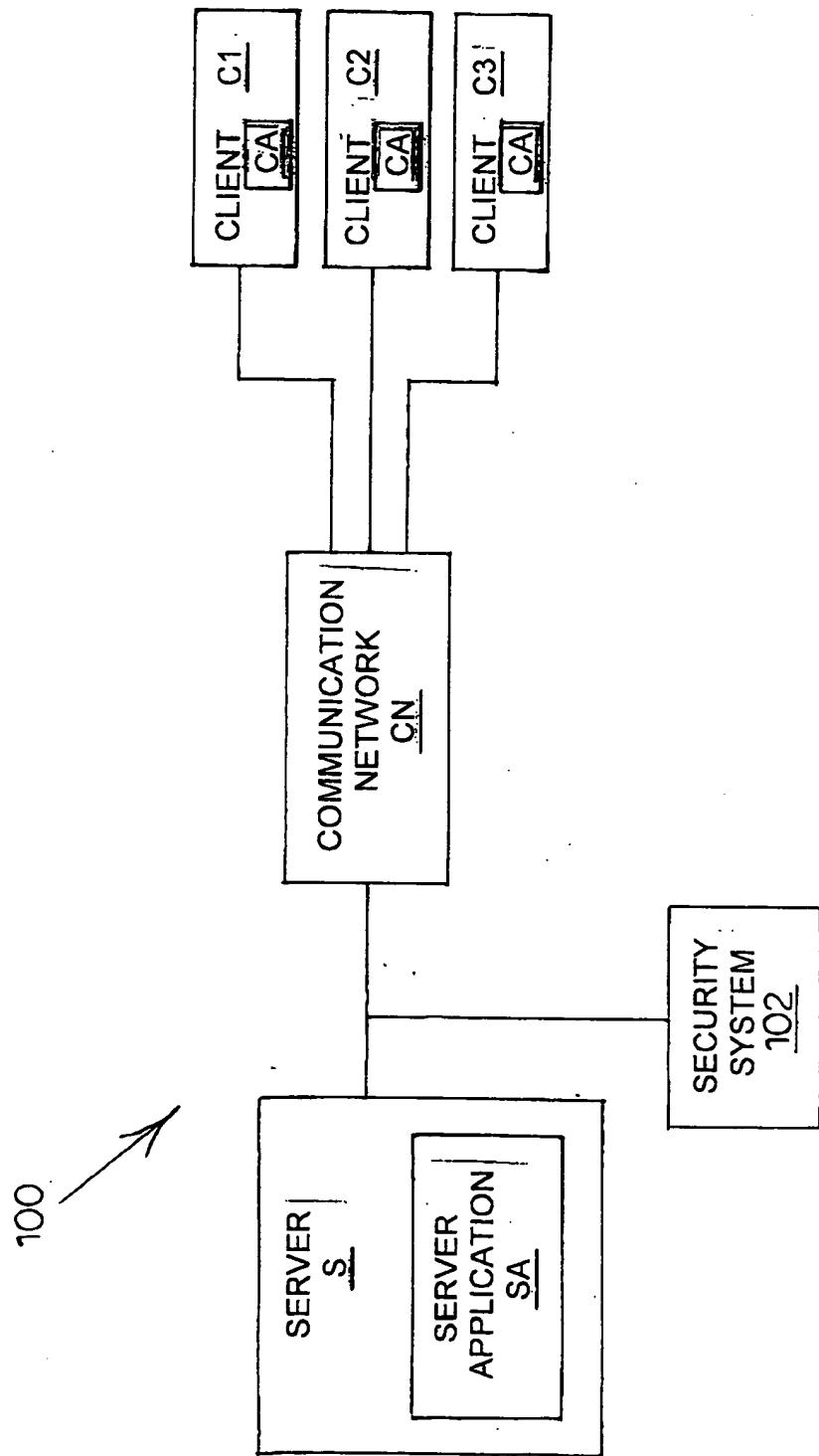


Fig. 1A

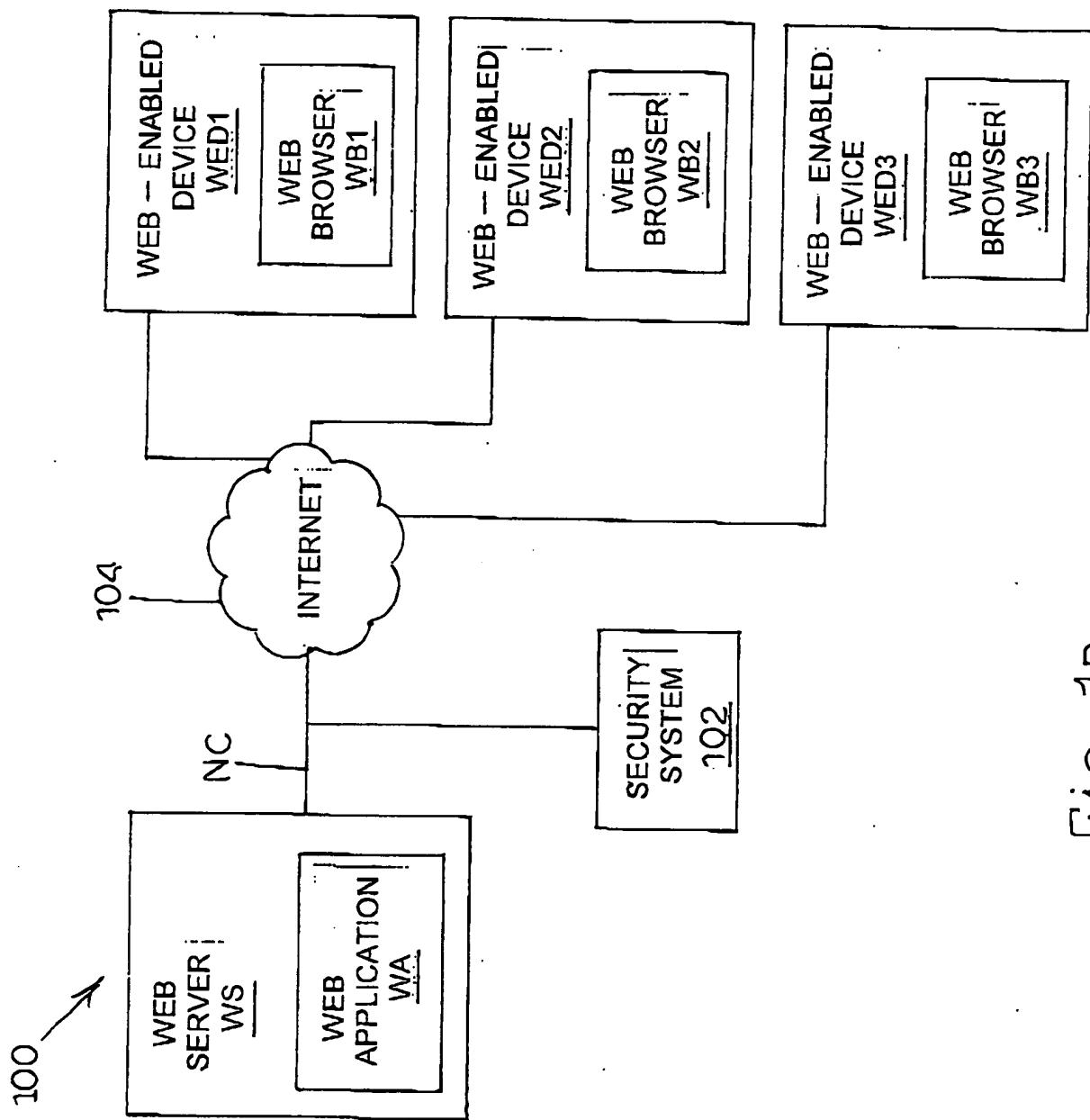
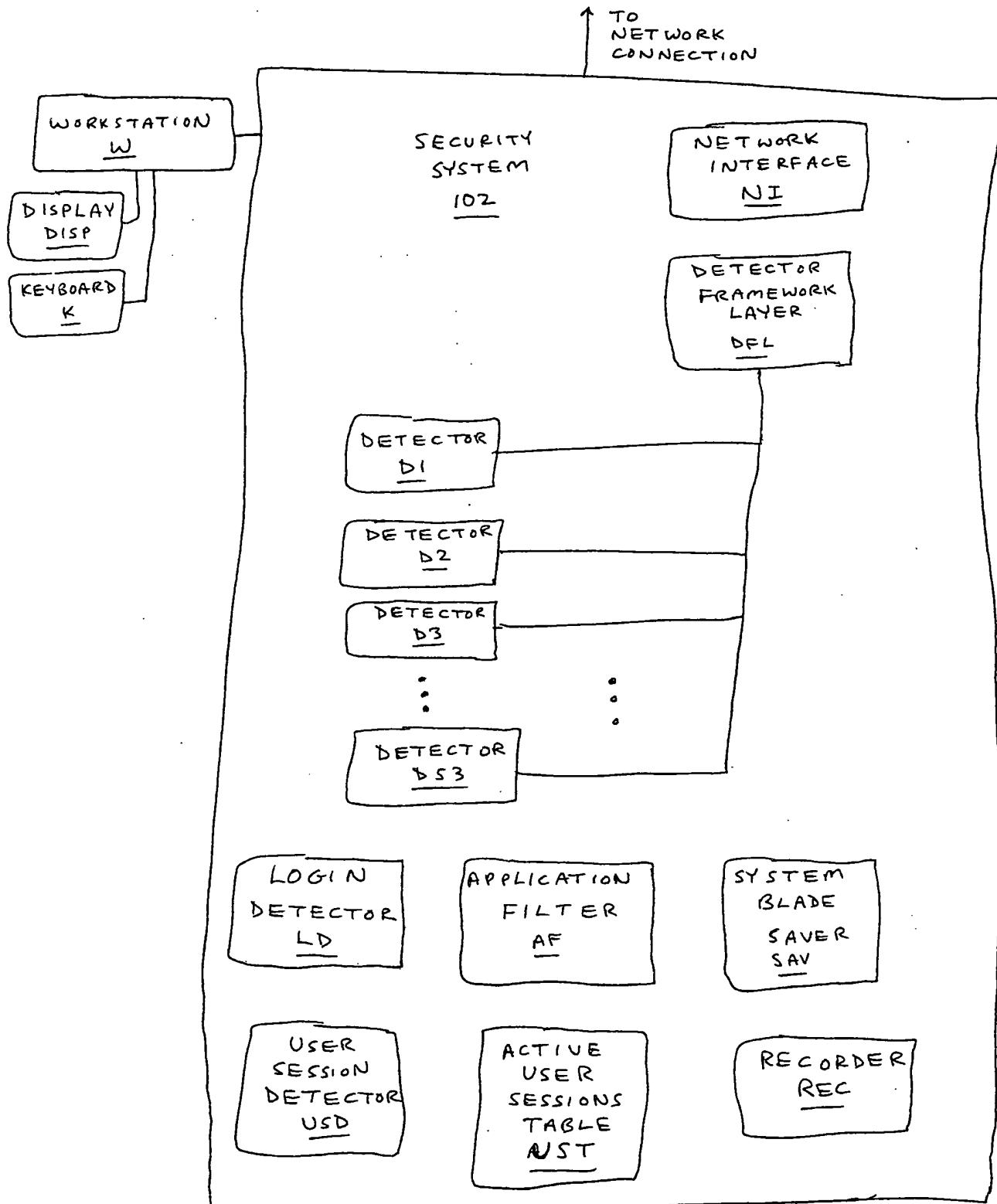
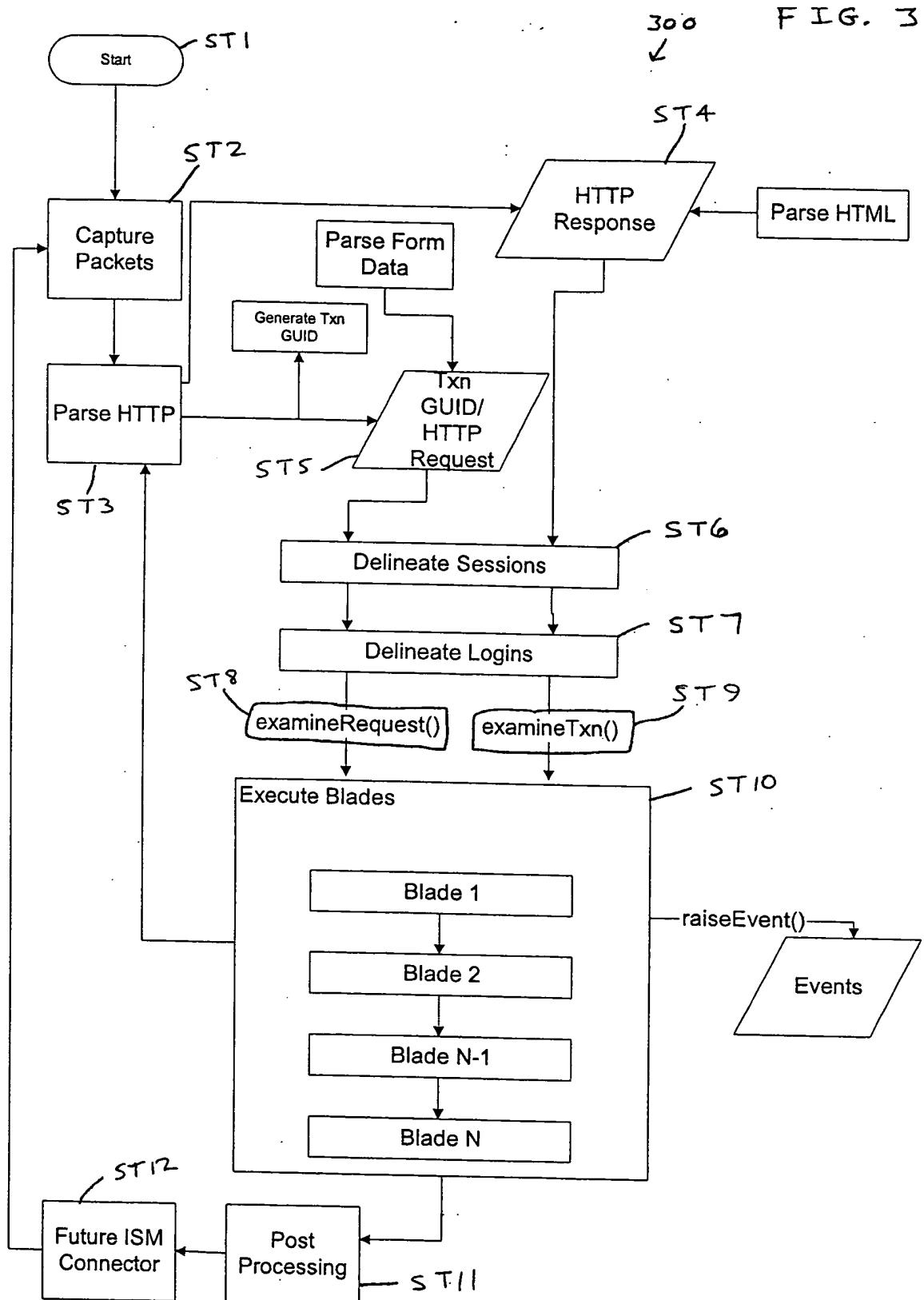


Fig. 1B

FIG. 2





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FIG. 4

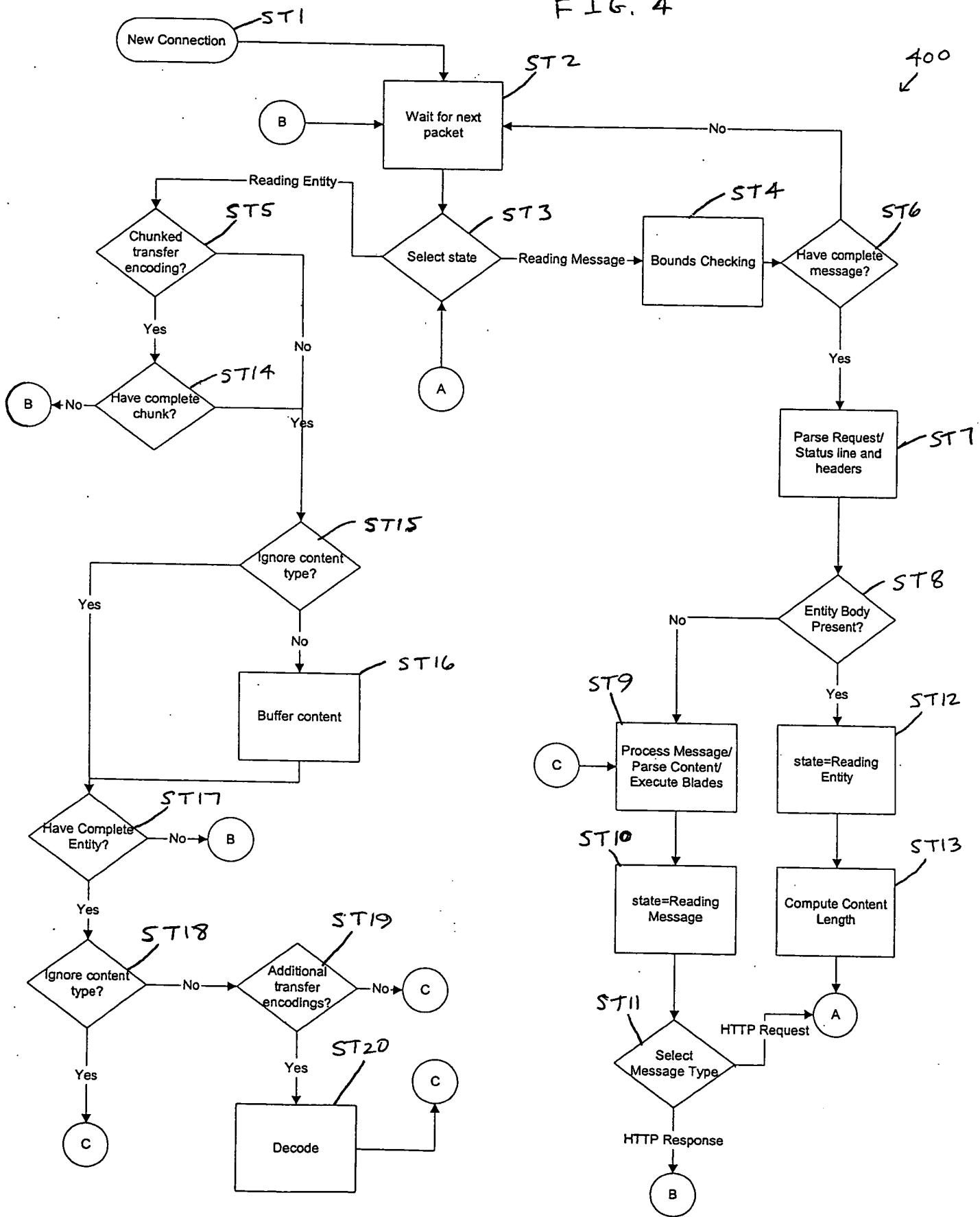
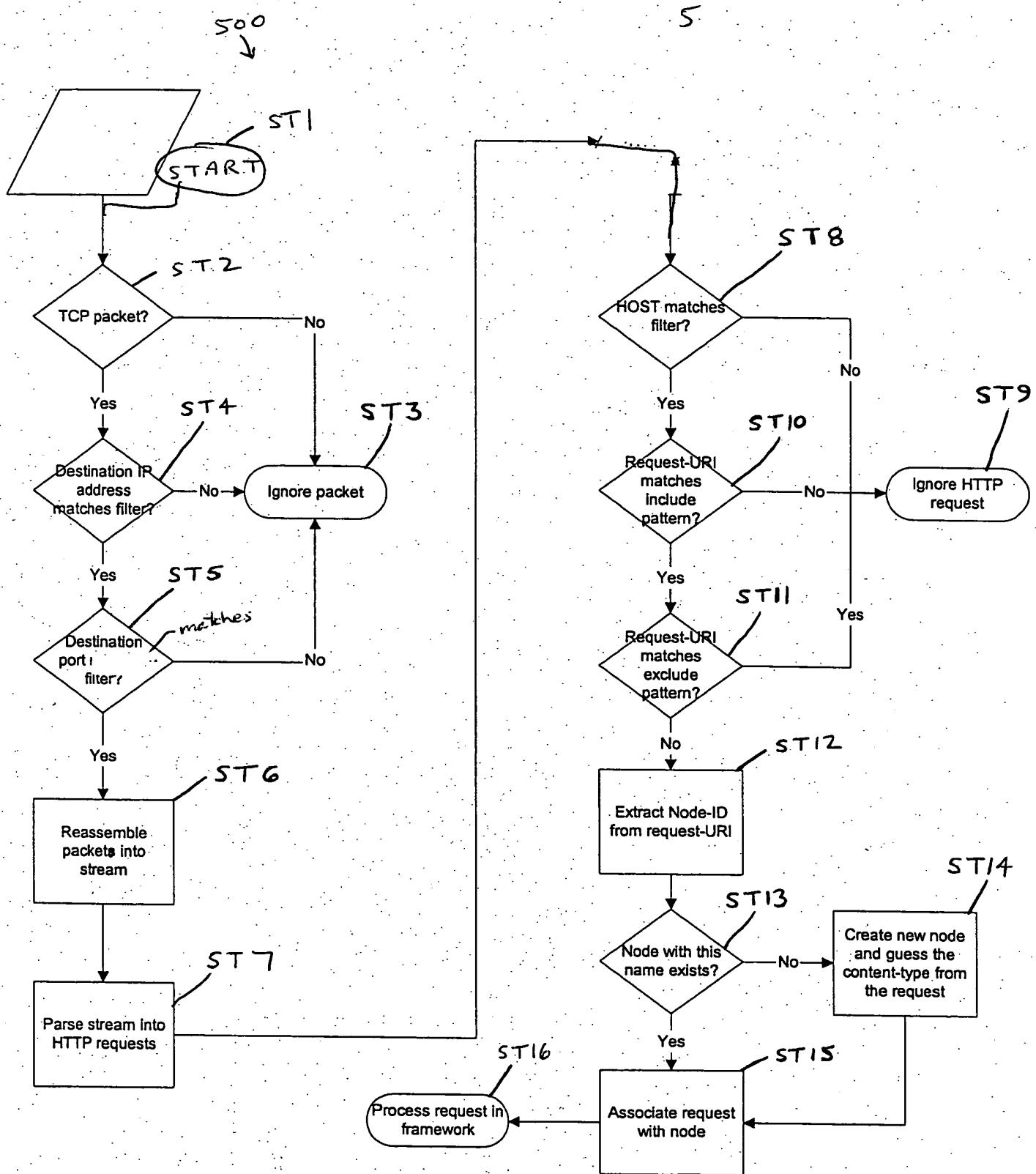
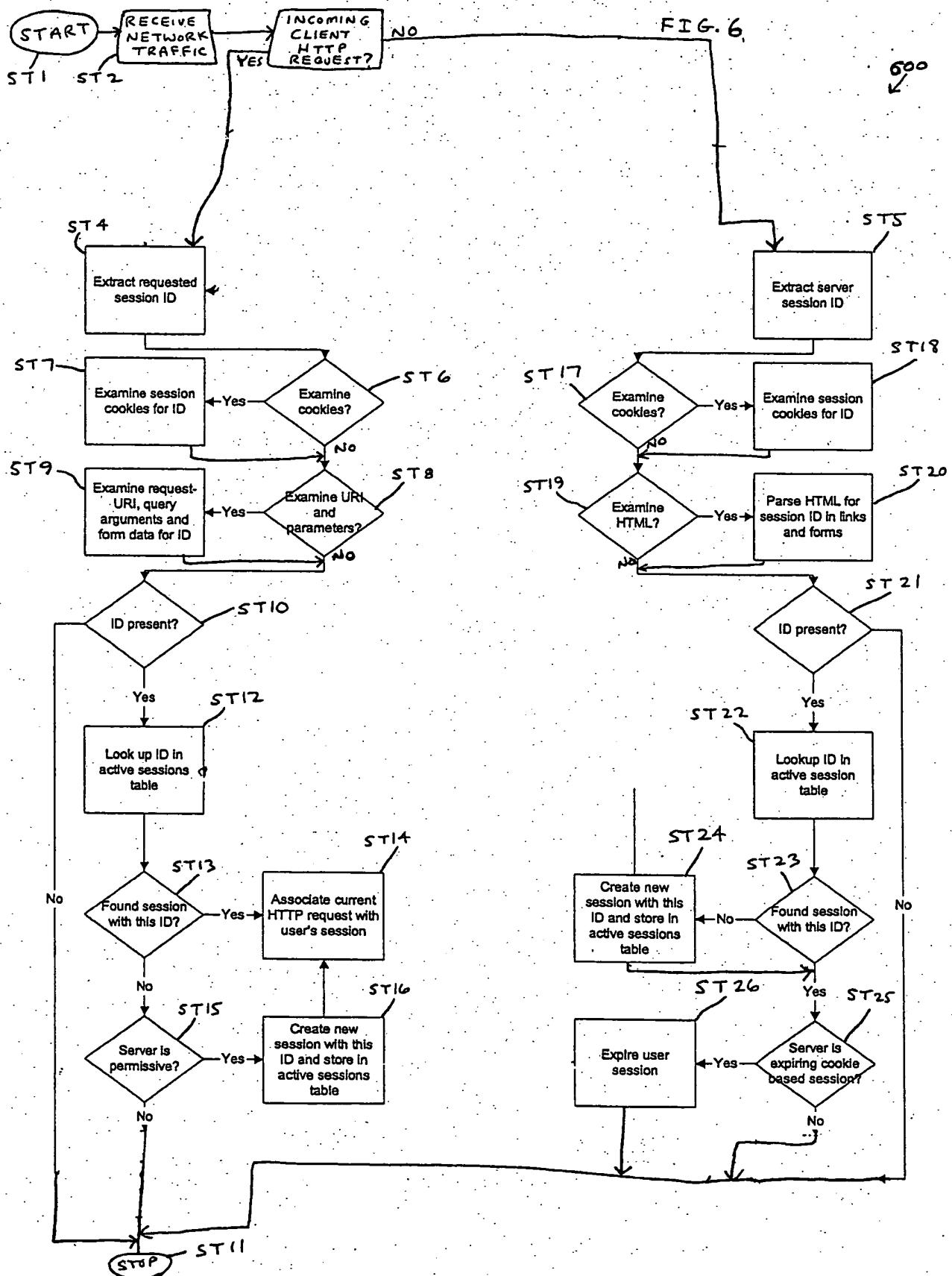


FIG.

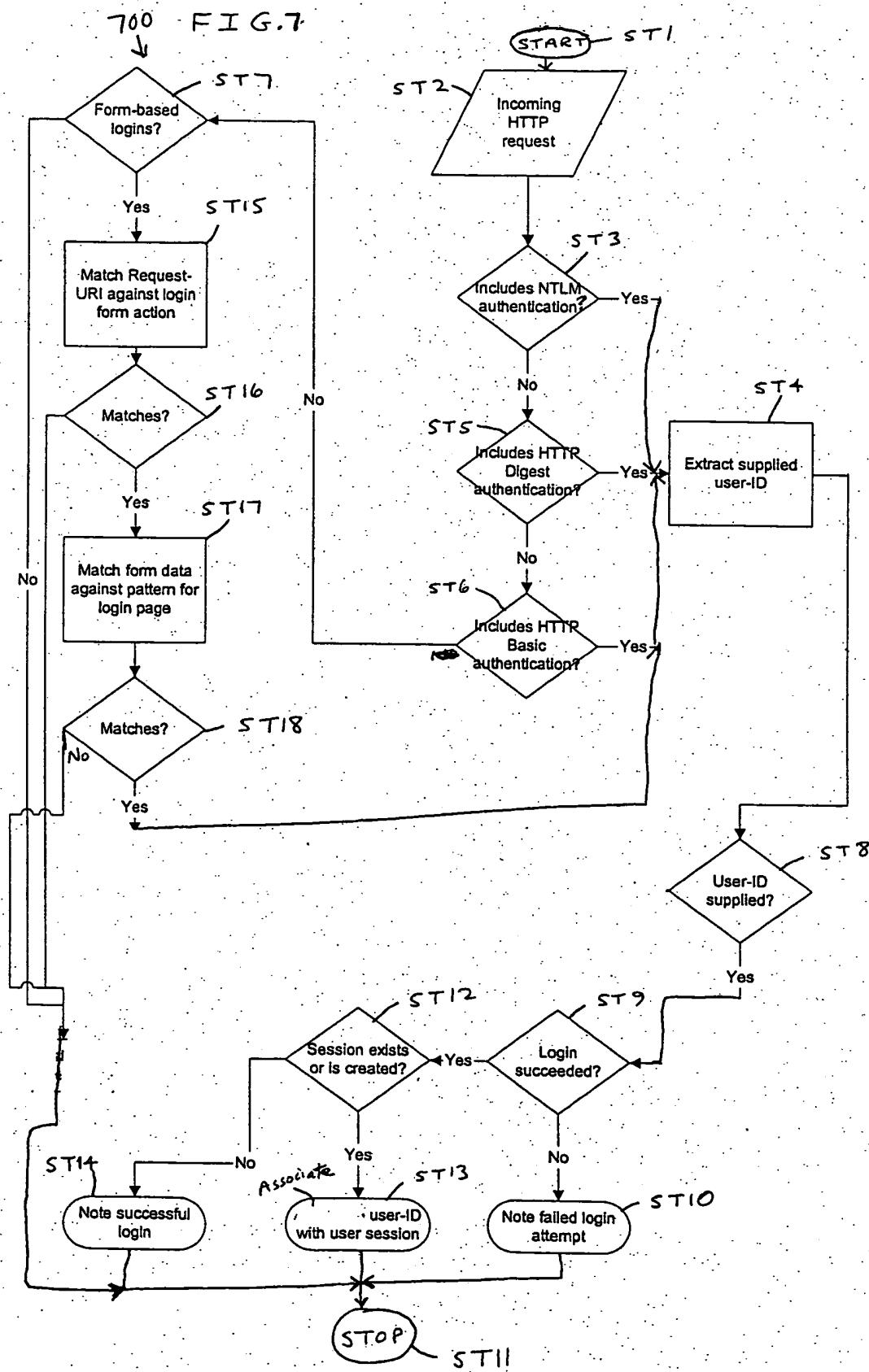
5



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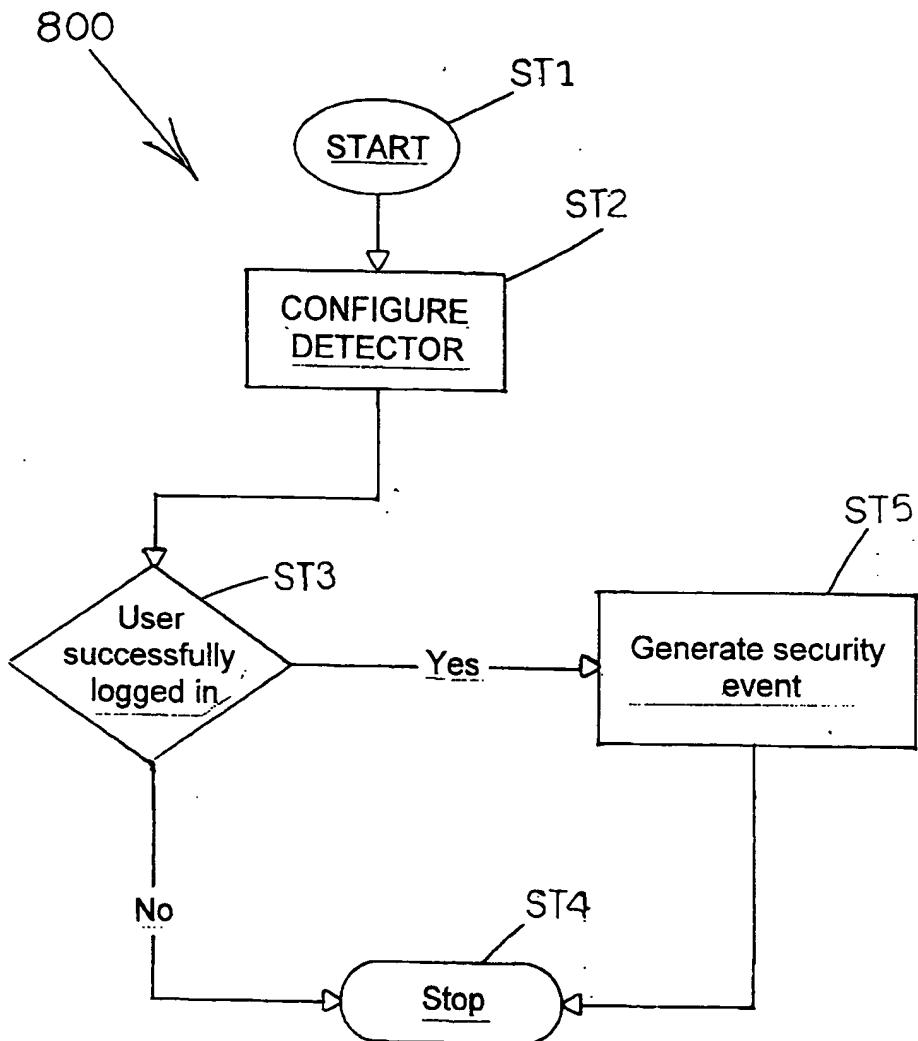


Fig. 8

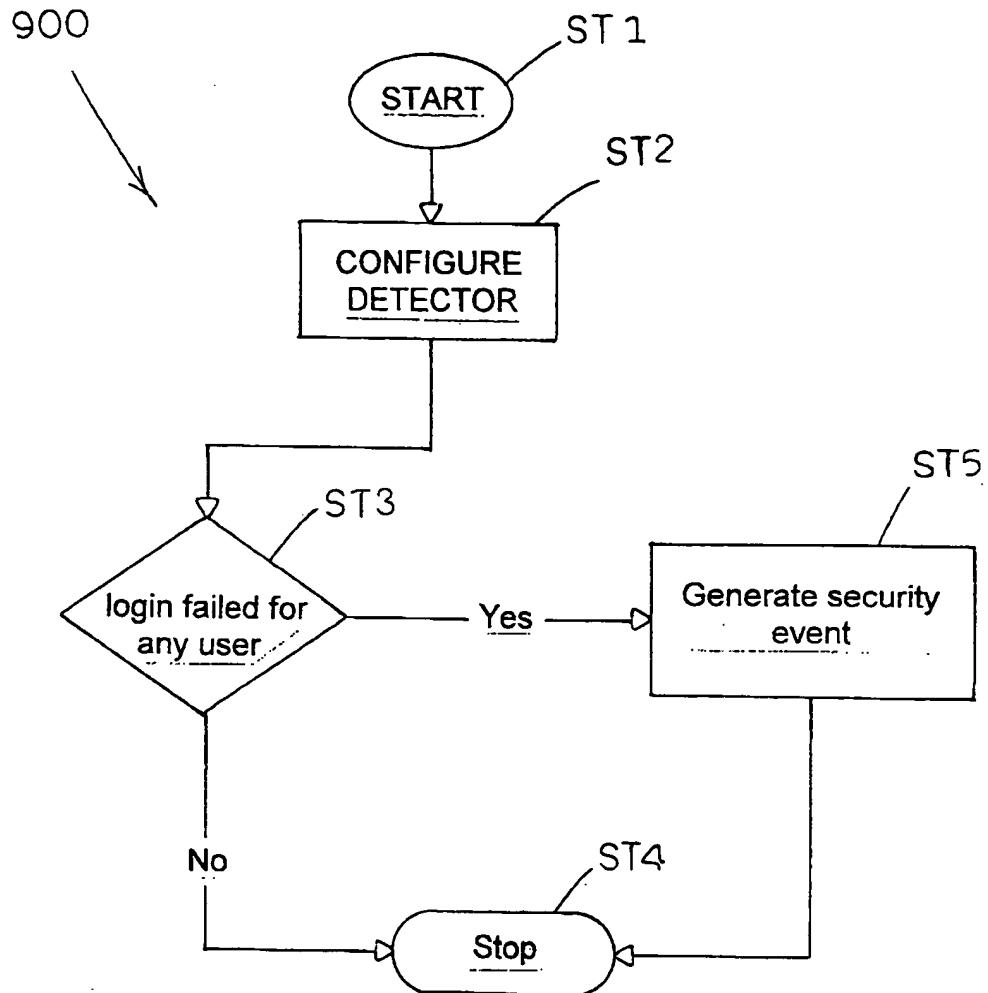


Fig. 9

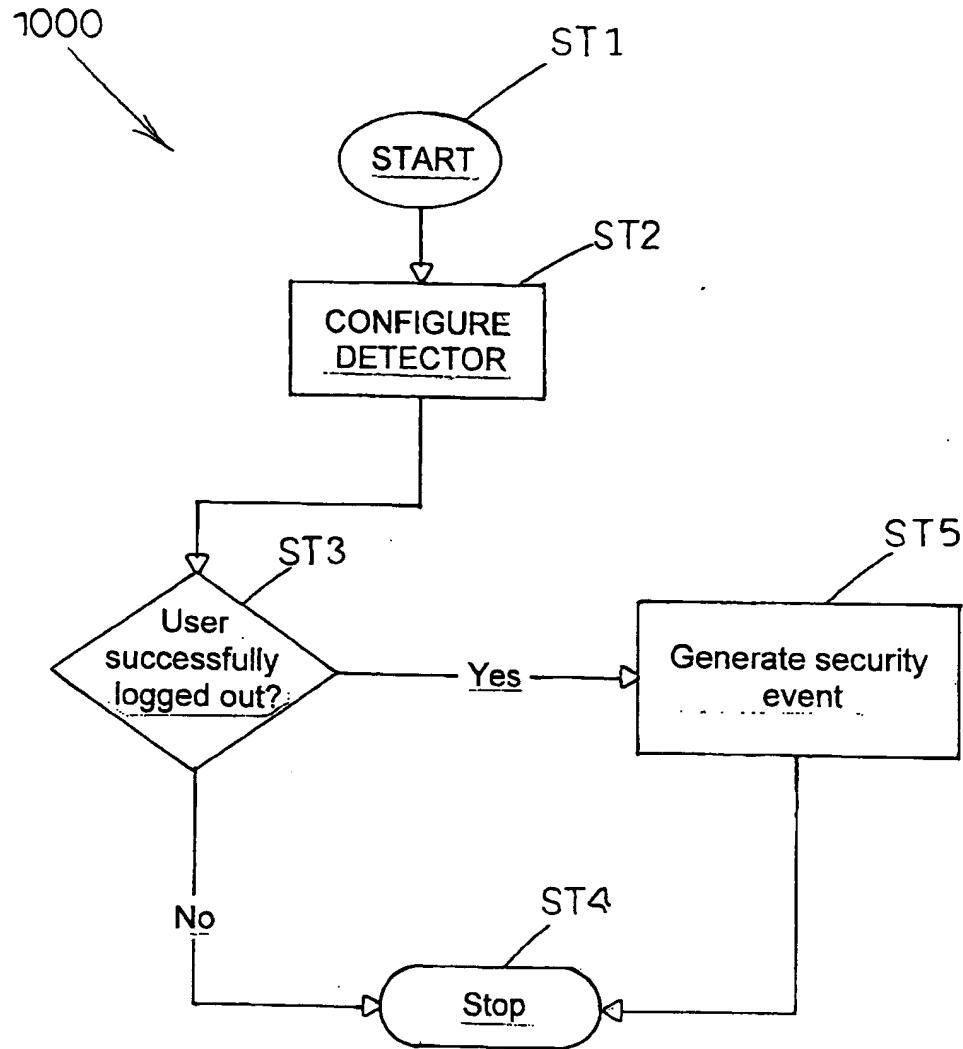


Fig. 10

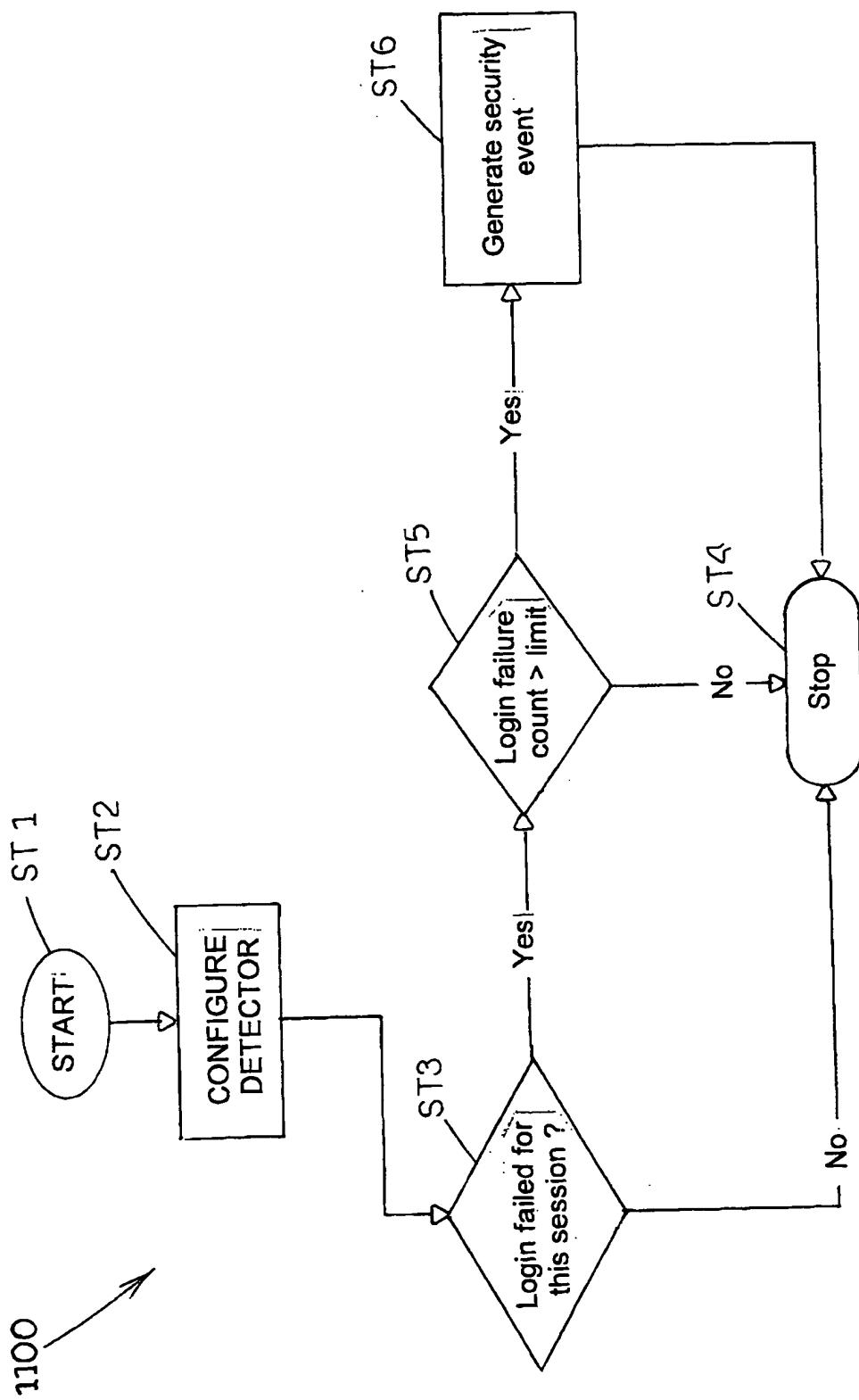


FIG. 11

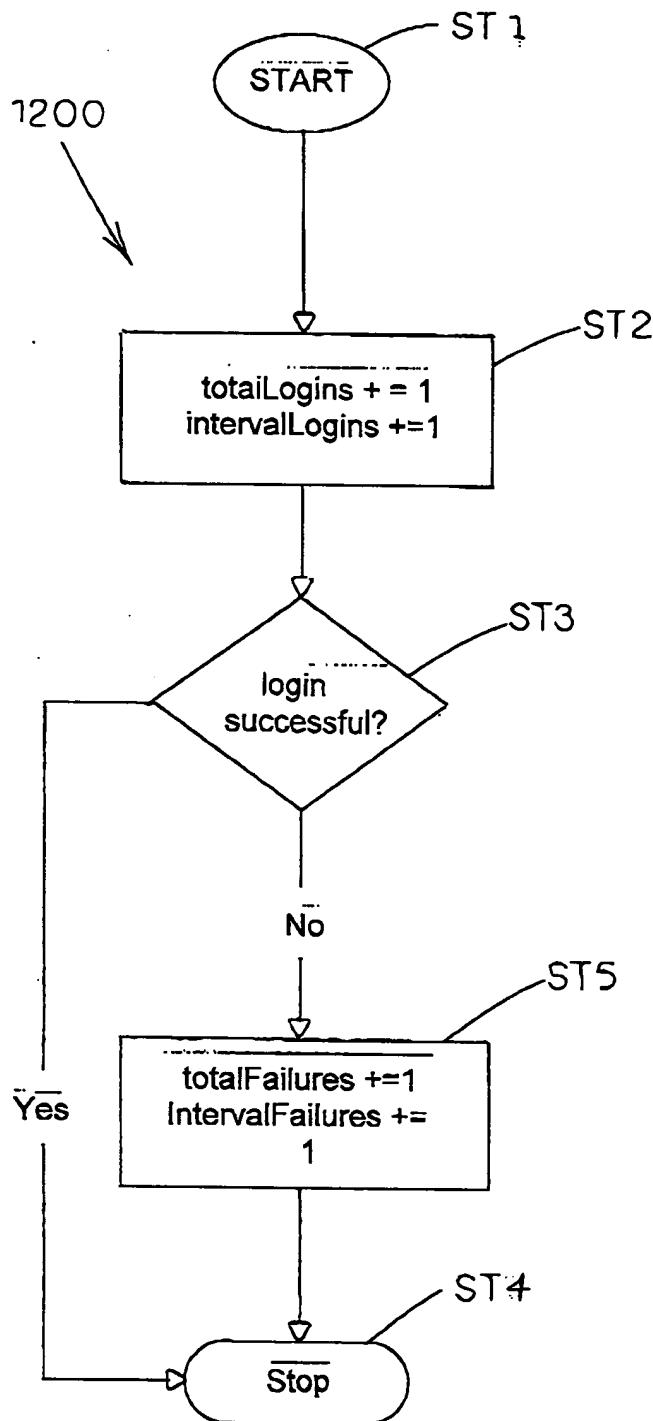


Fig. 12A

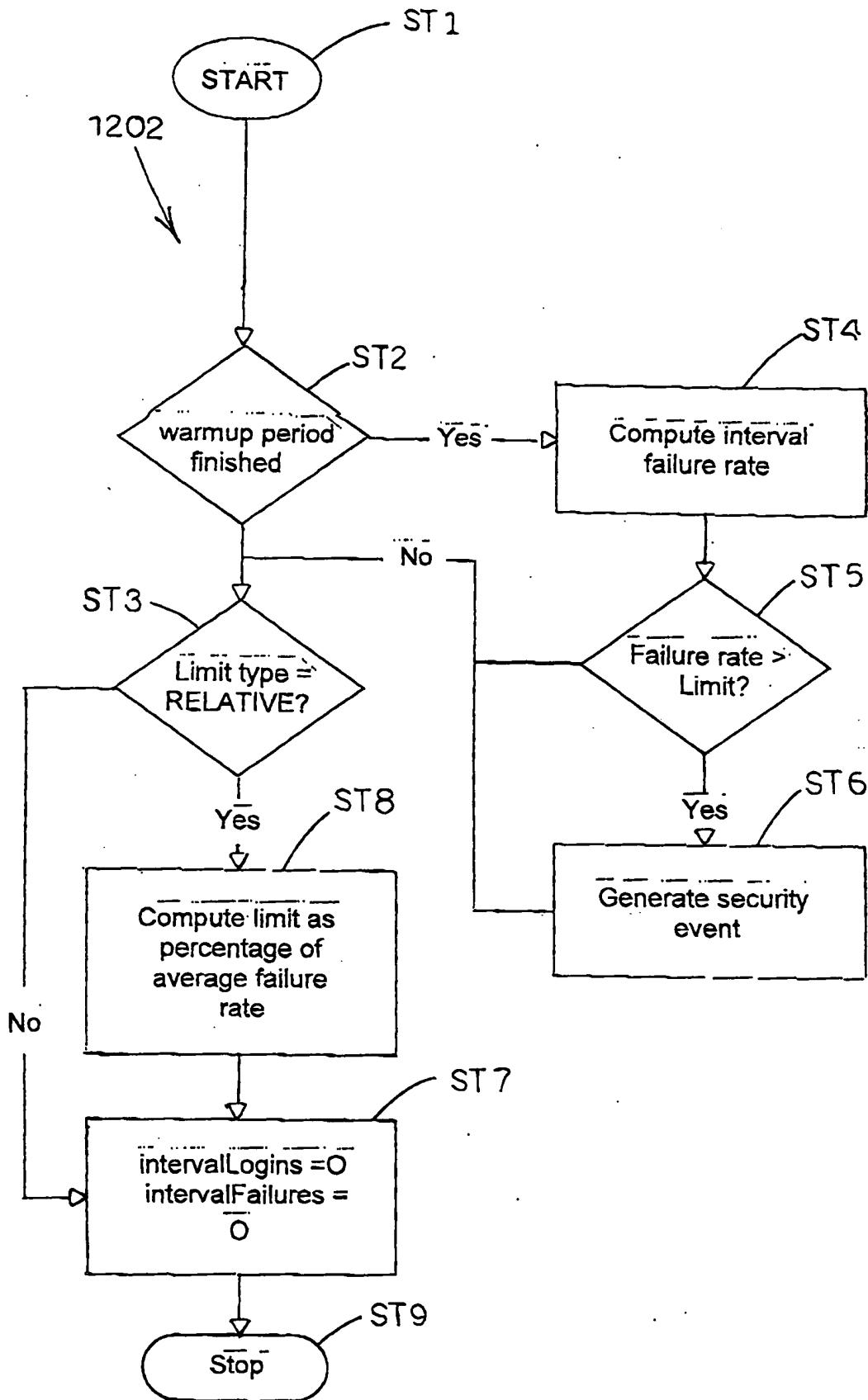


Fig. 12B

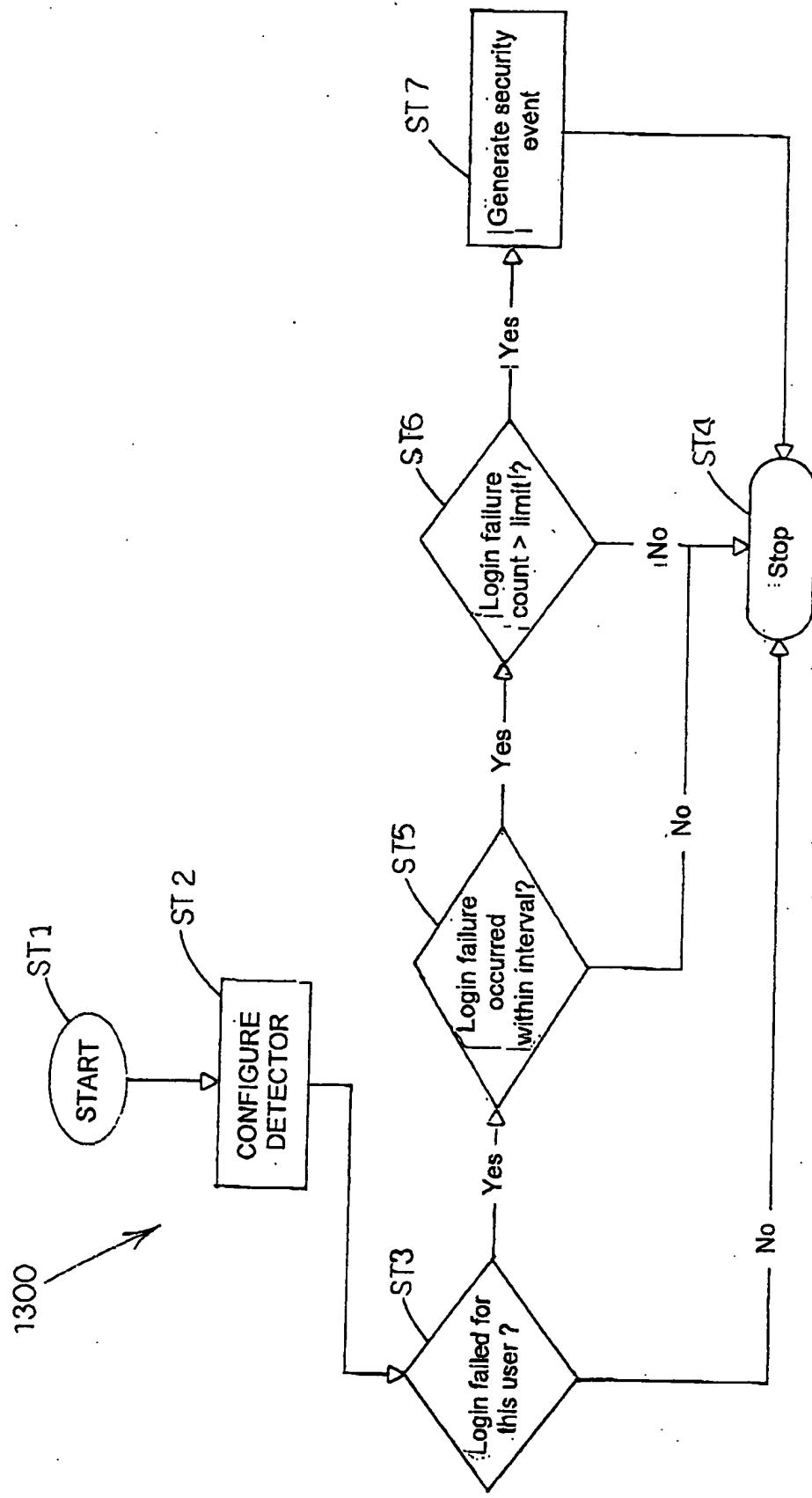


Fig . 13

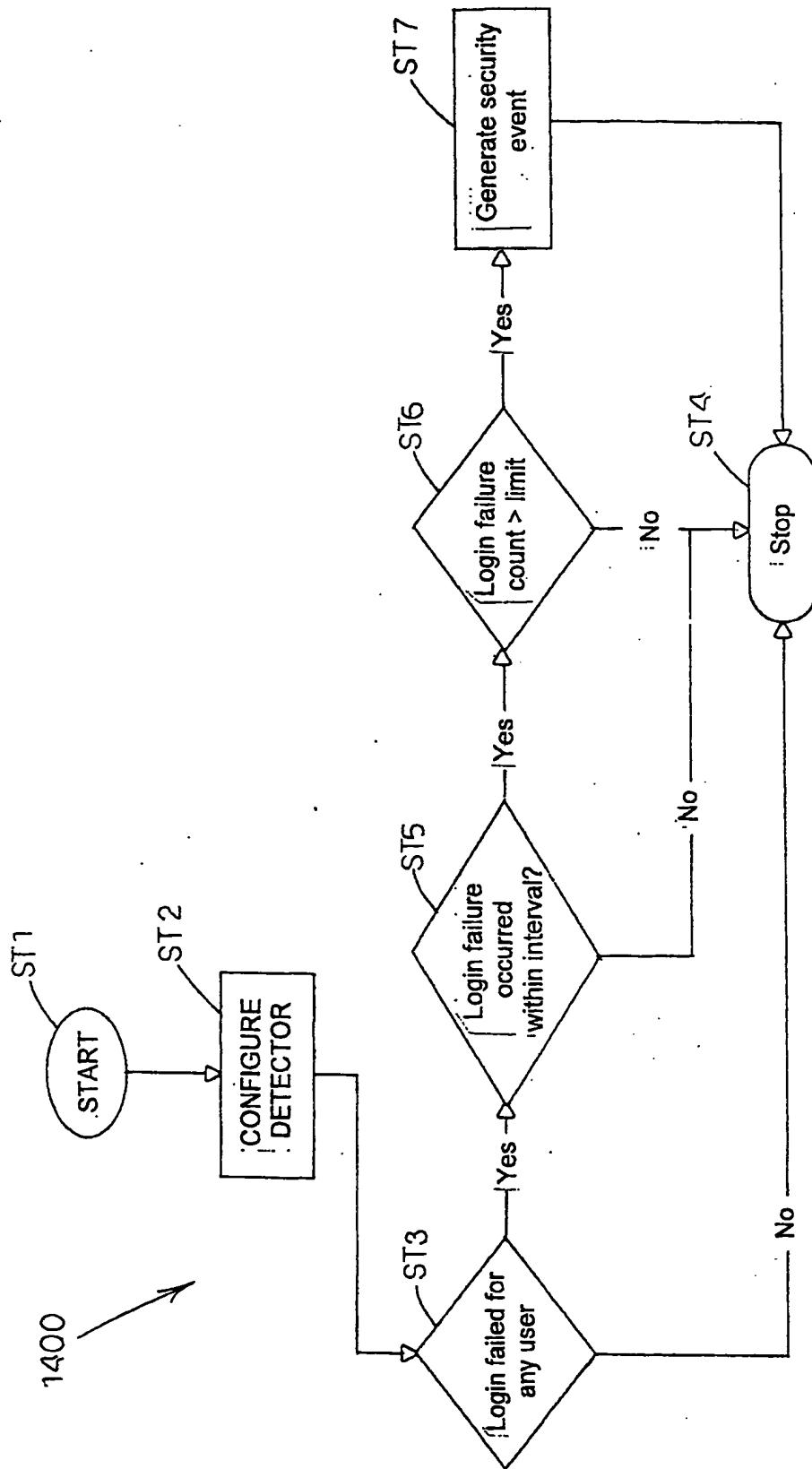


Fig . 14

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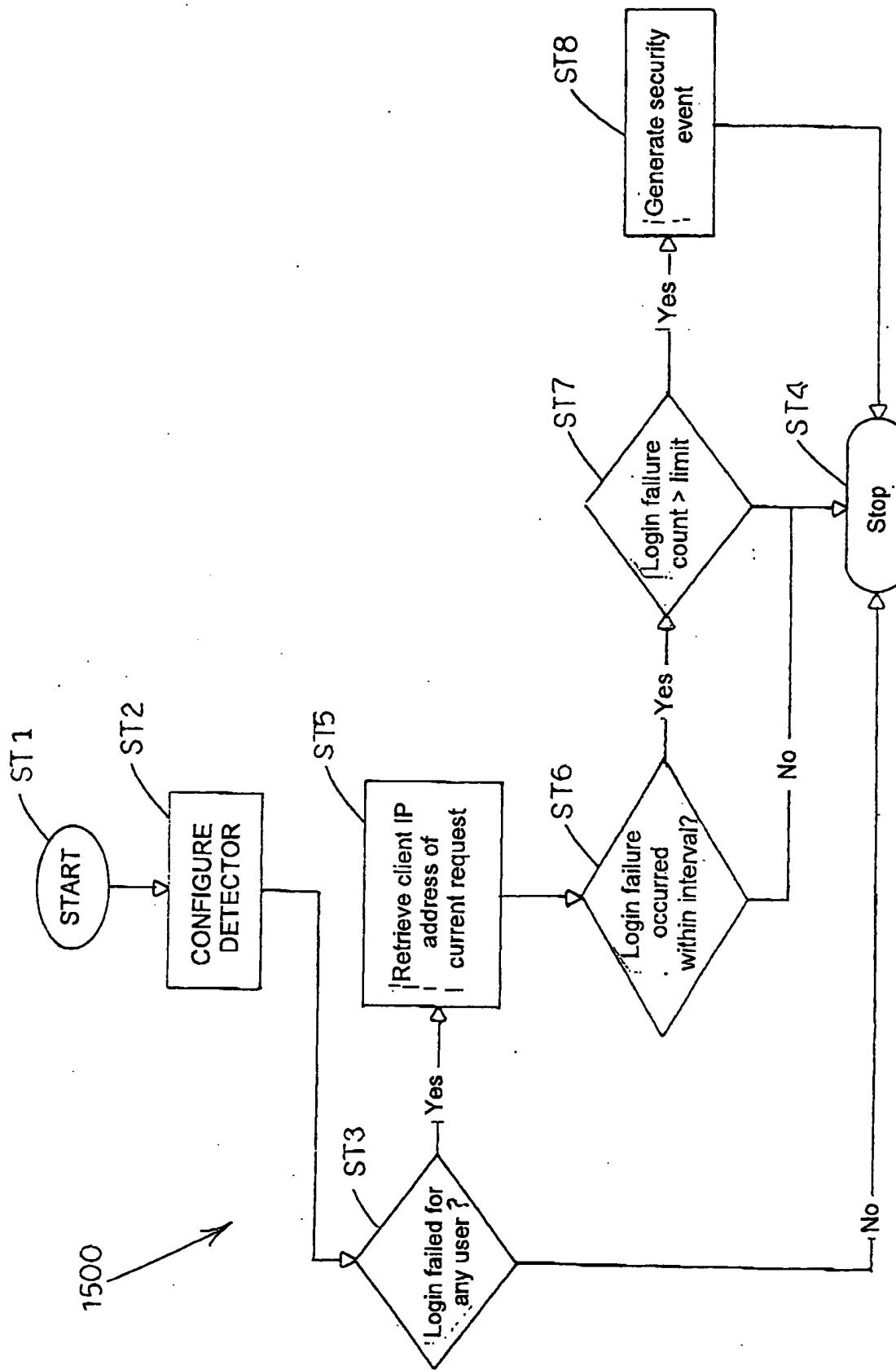


FIG . 15A

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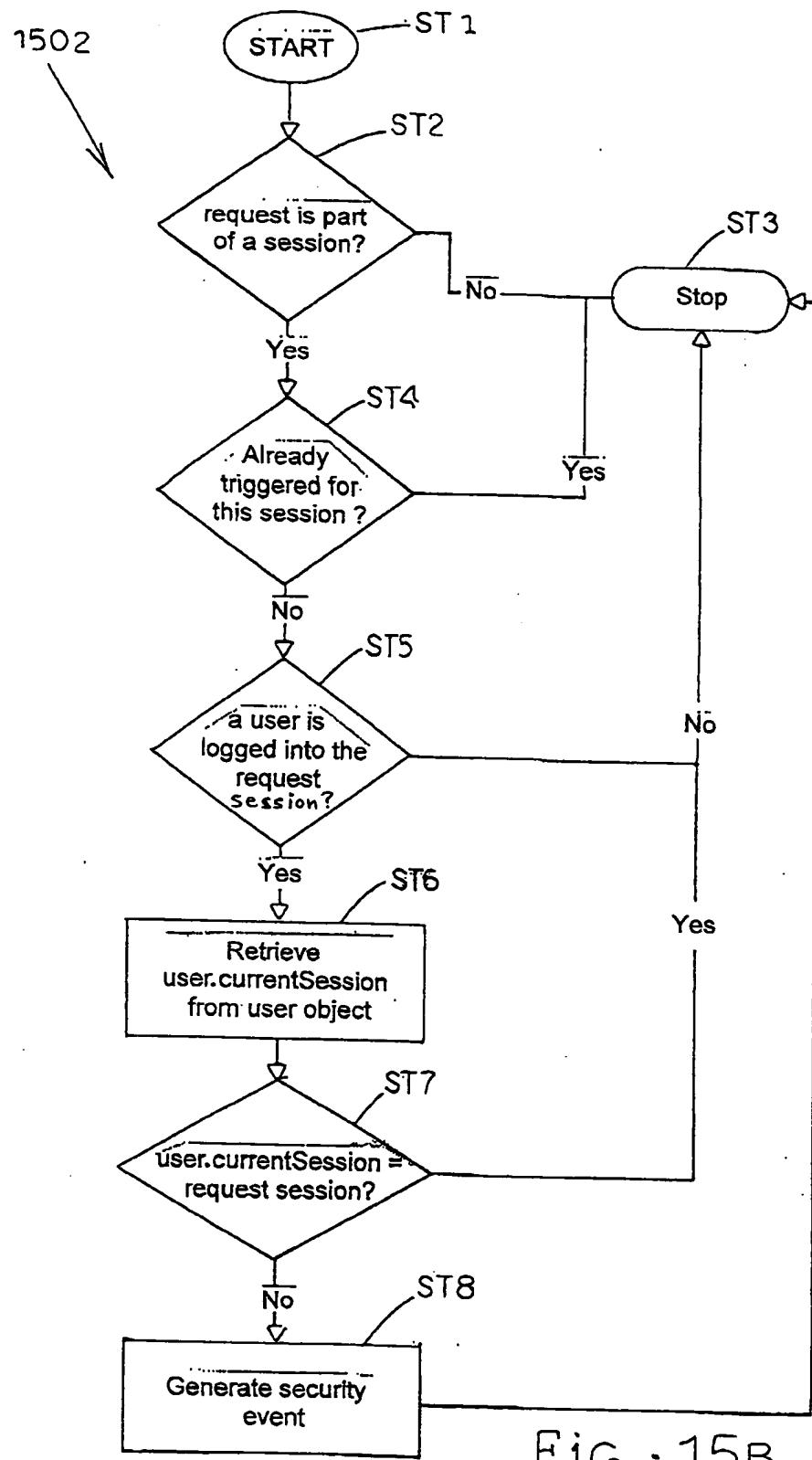


Fig. 15B

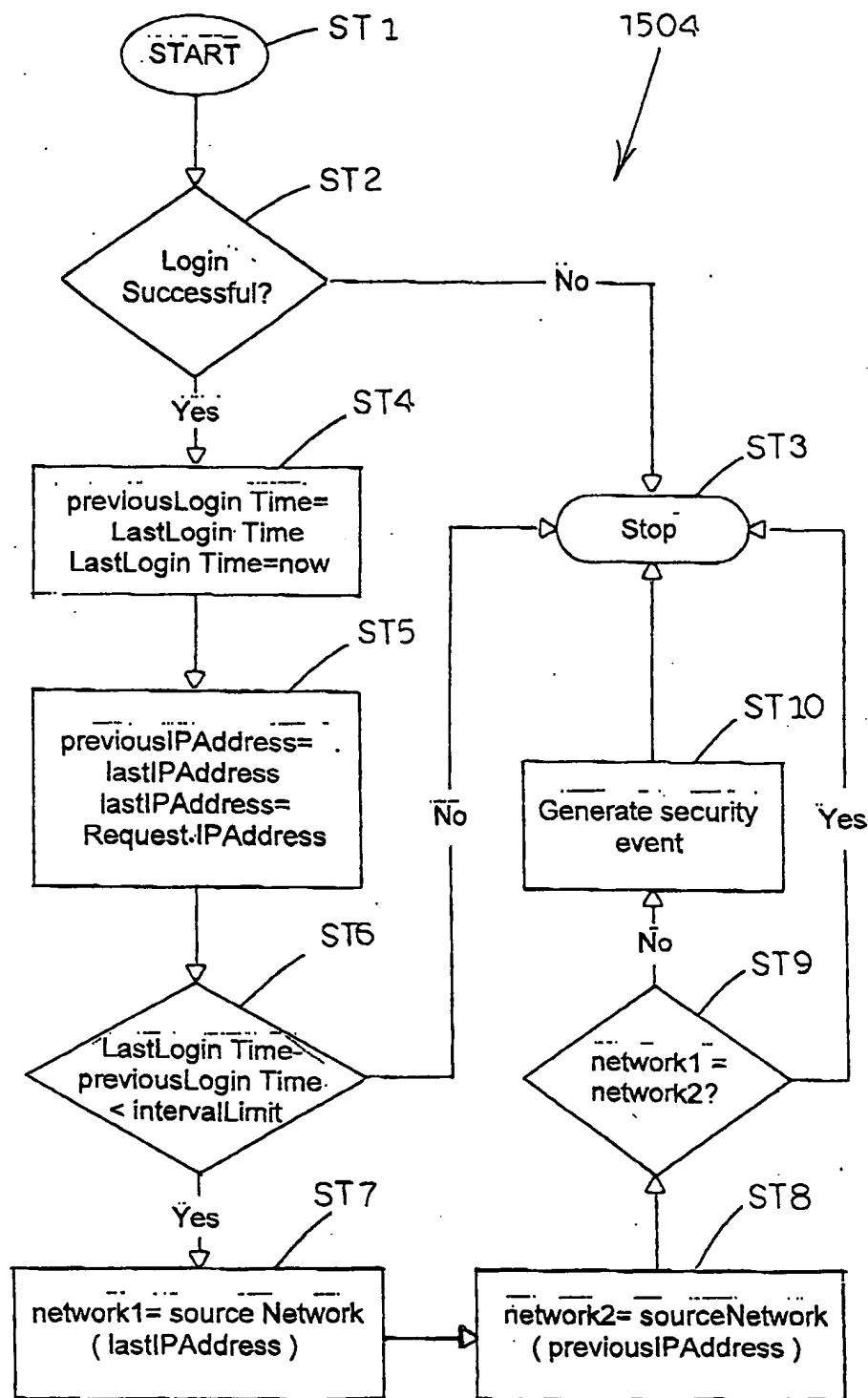
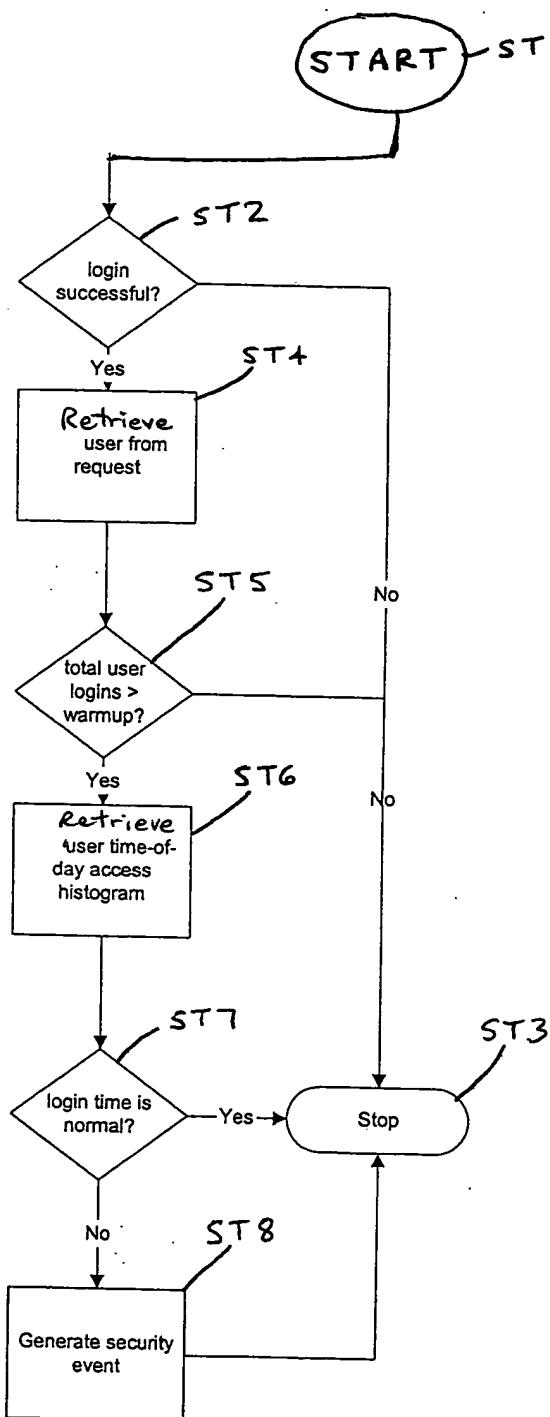


Fig. 15c

1600

FIG. 16A



1602

FIG. 16B

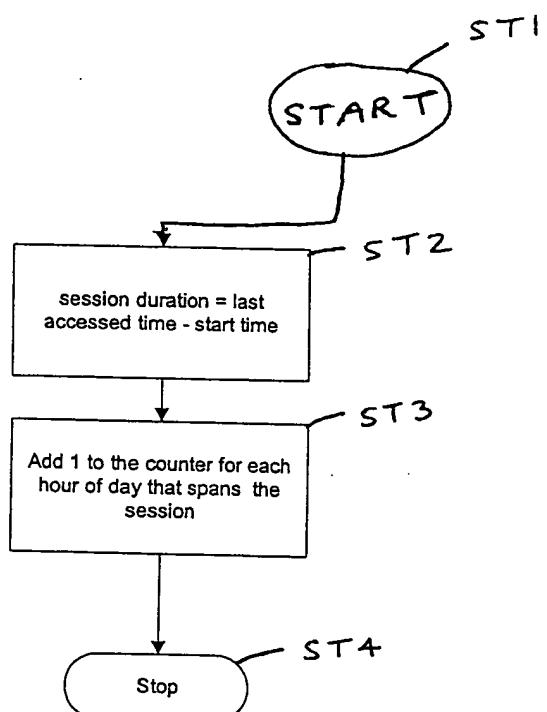


FIG. 17A

1700  
 ↓

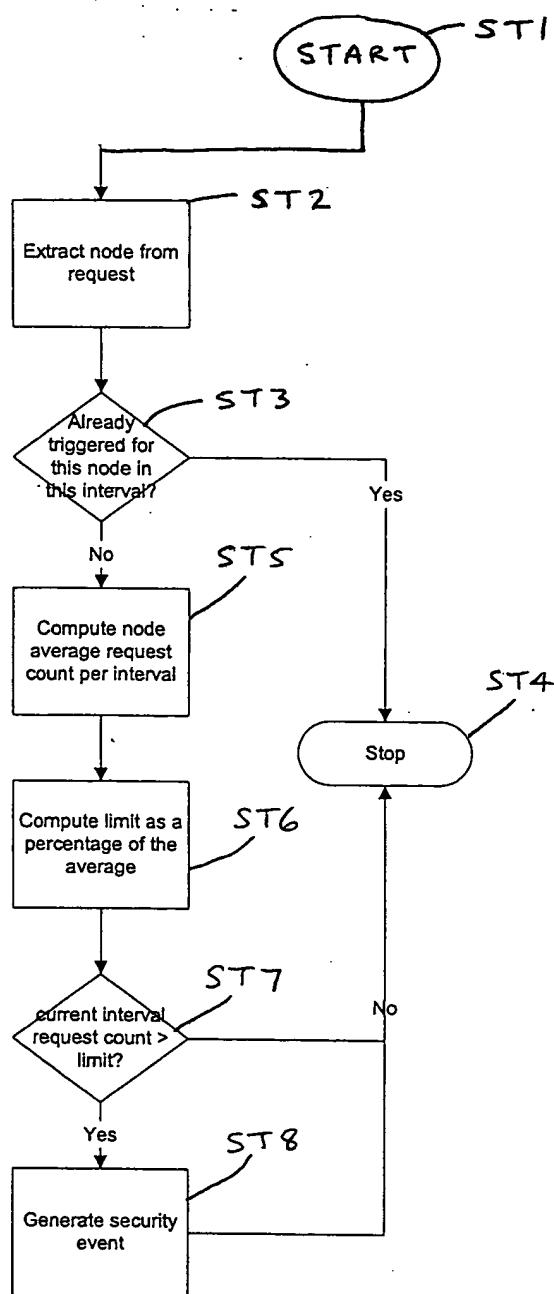


FIG. 17B

1702

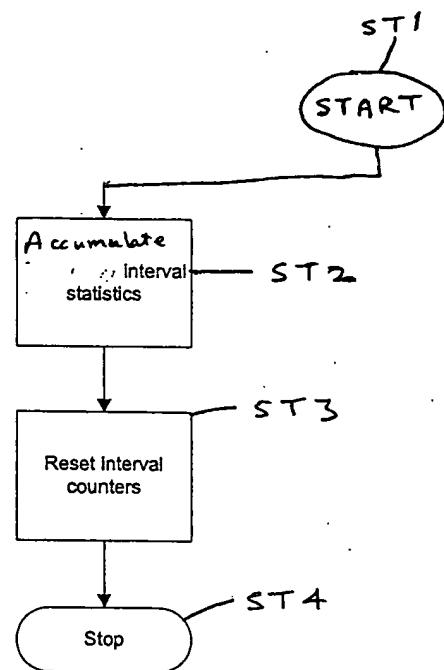


FIG. 18

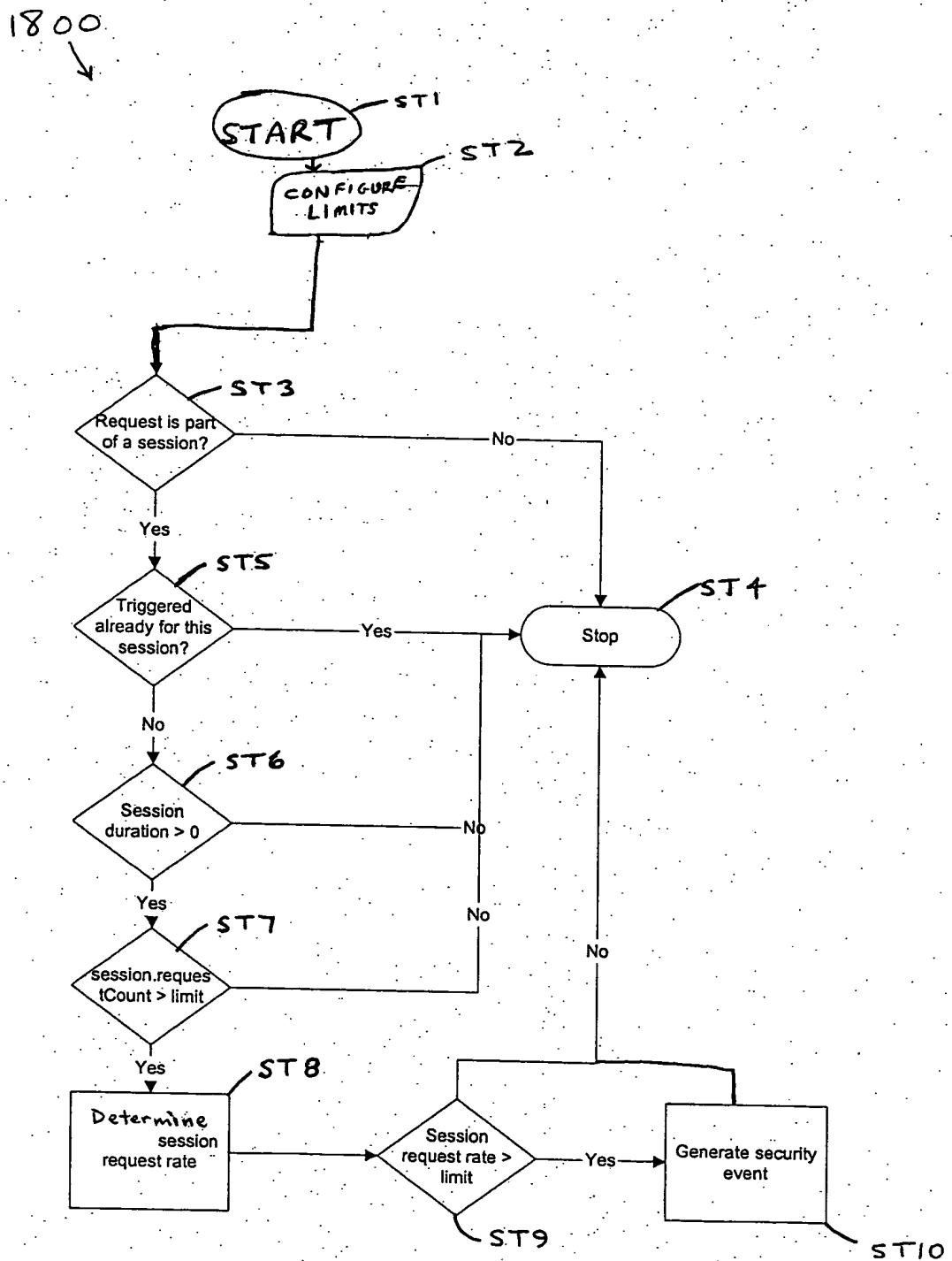


FIG. 19A

19 00  
↓

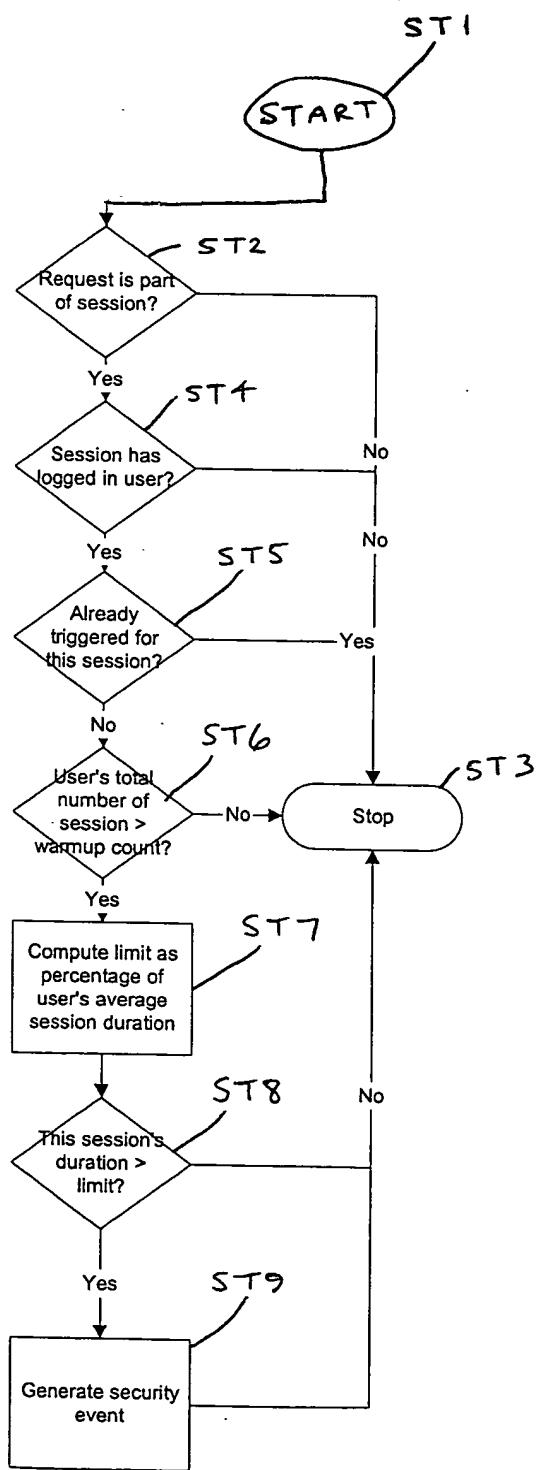


FIG. 19B

1902  
↓

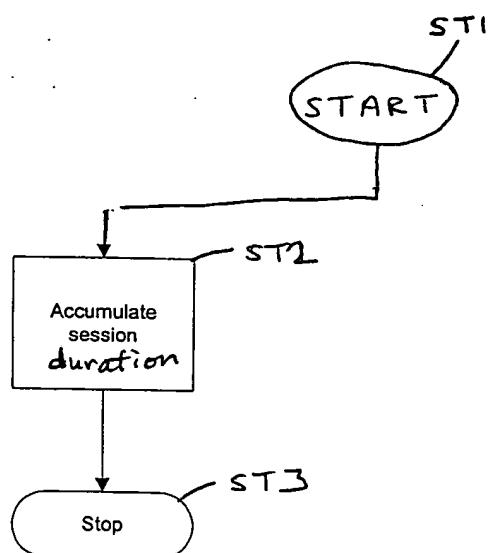


FIG. 20A

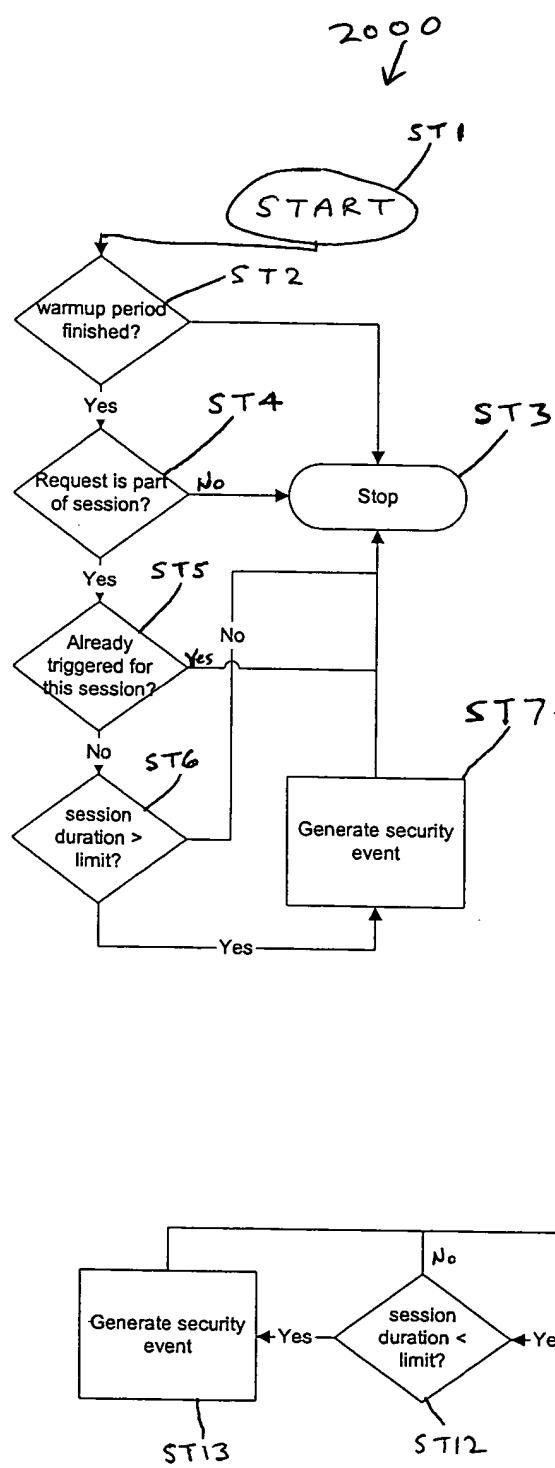
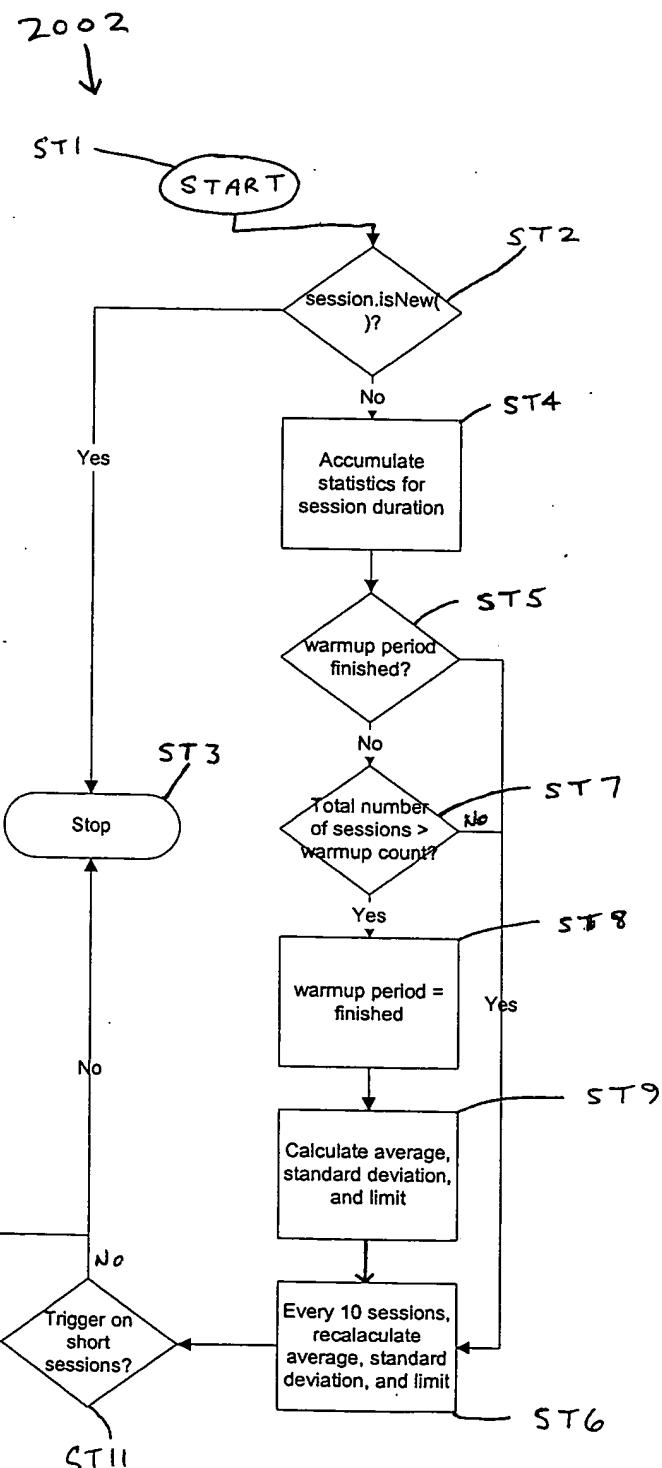


FIG. 20B



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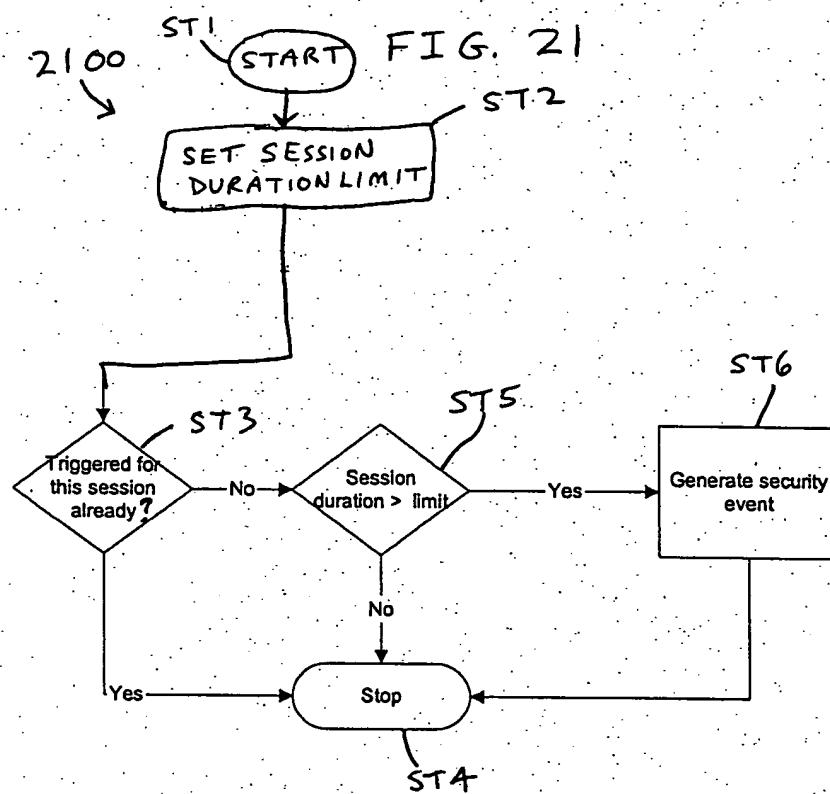


FIG. 22A

2200  
 ↓

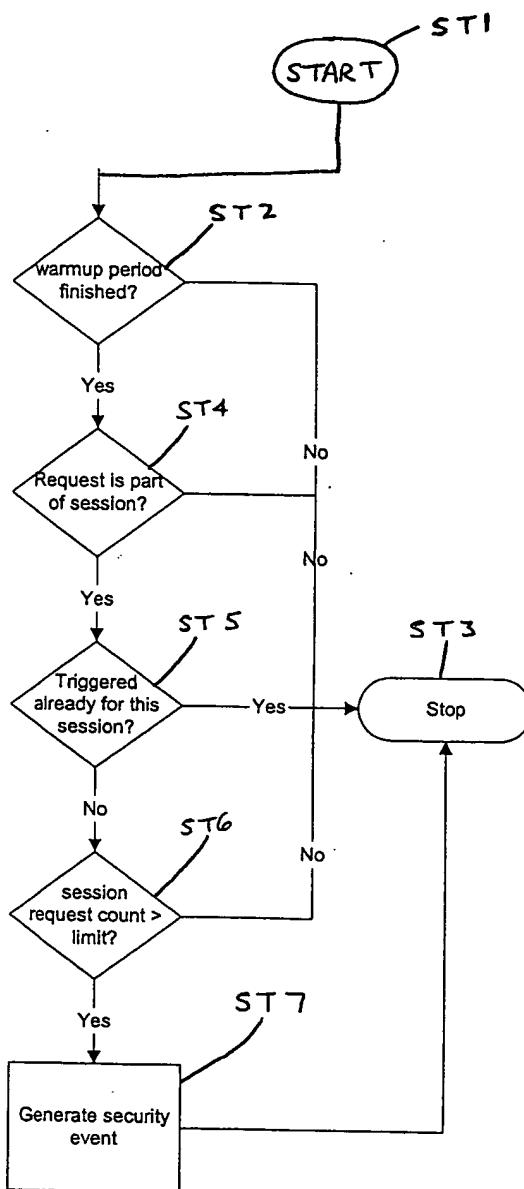


FIG. 22B

2202  
 ↓

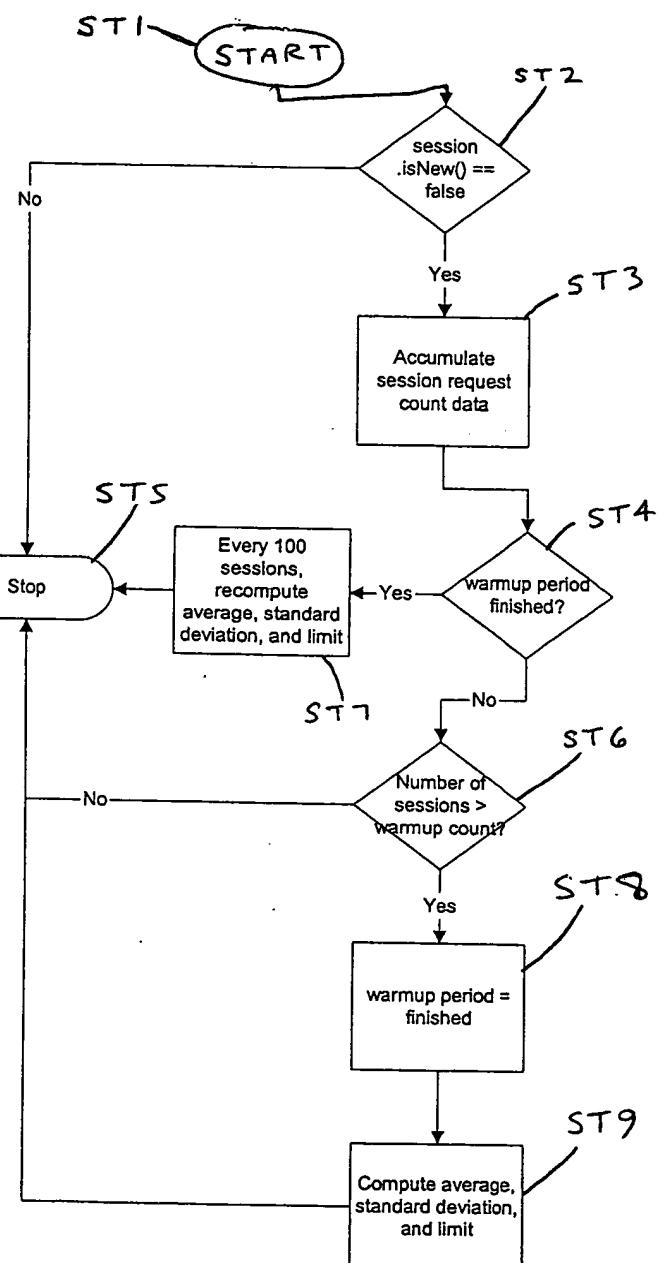


FIG. 23A

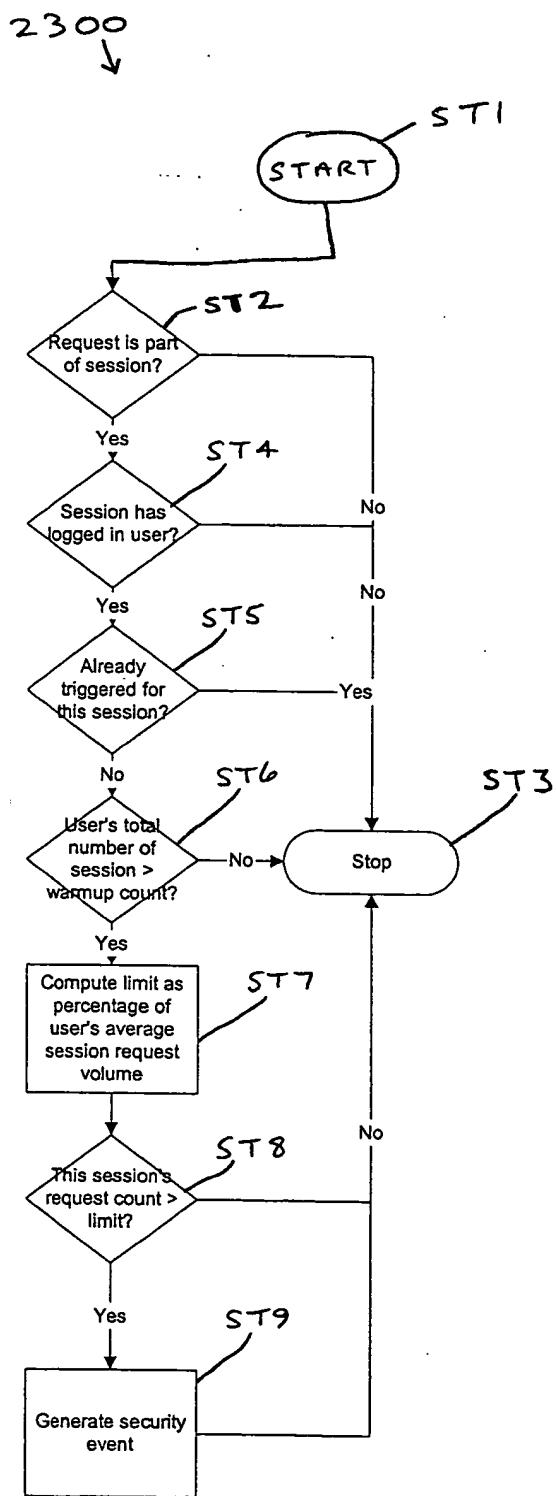
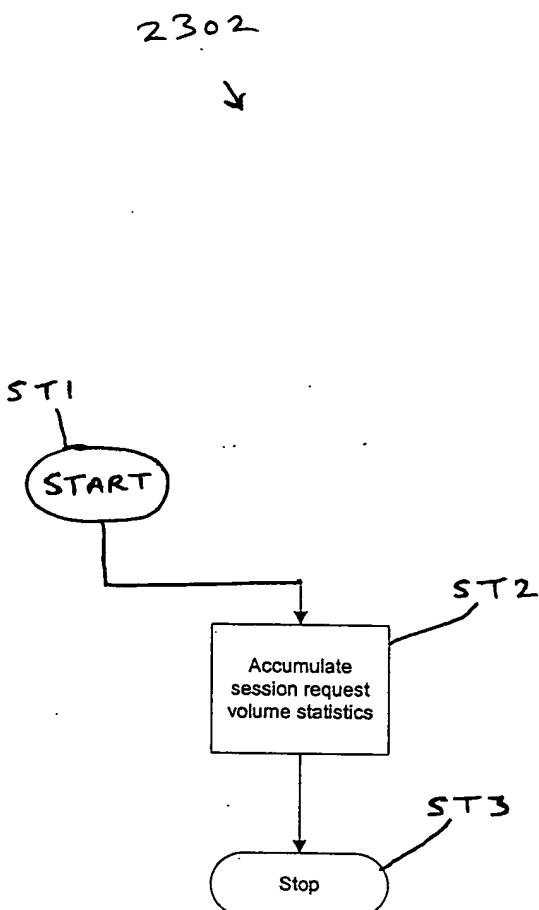


FIG. 23B



Title: METHODS, SYSTEMS AND COMPUTER  
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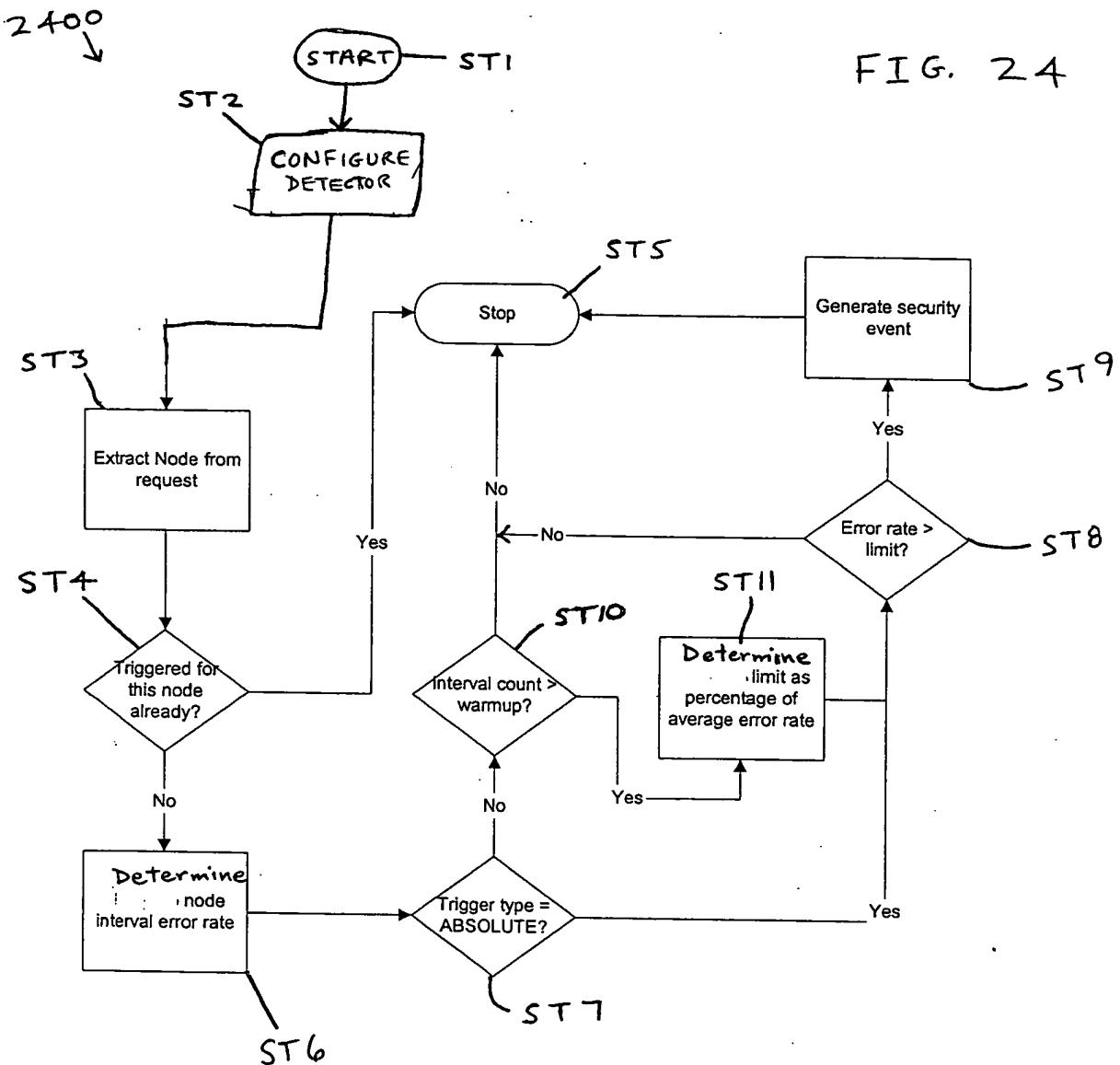
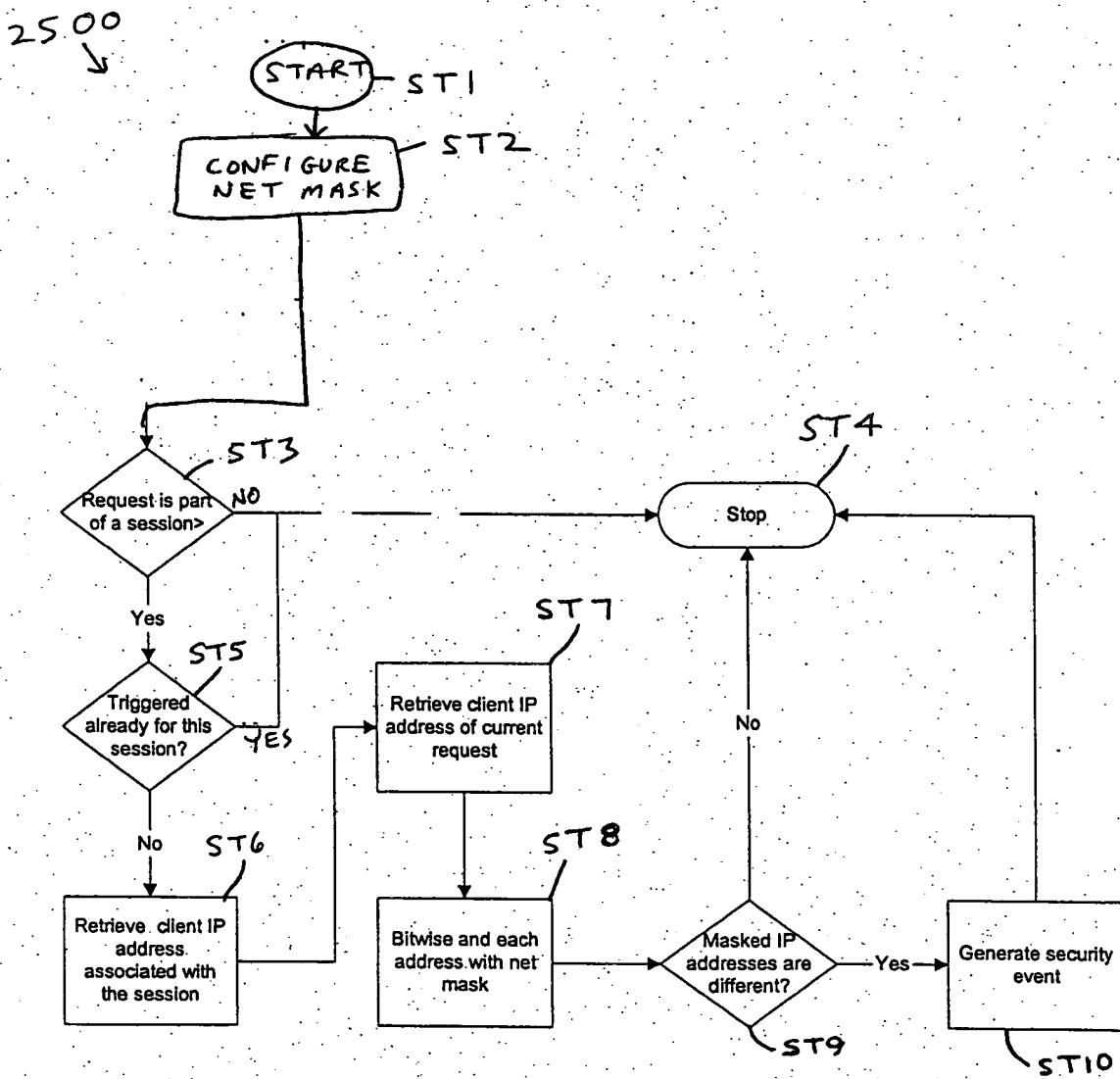


FIG. 25



26 00

FIG. 26

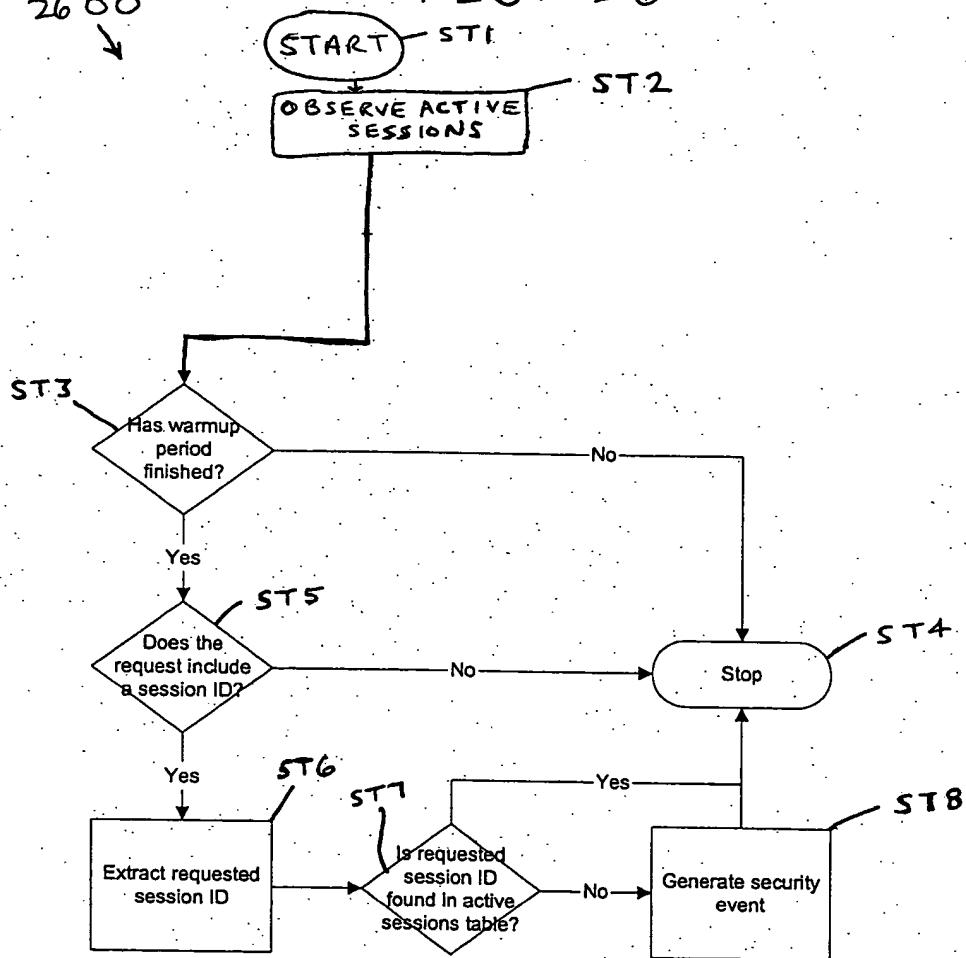
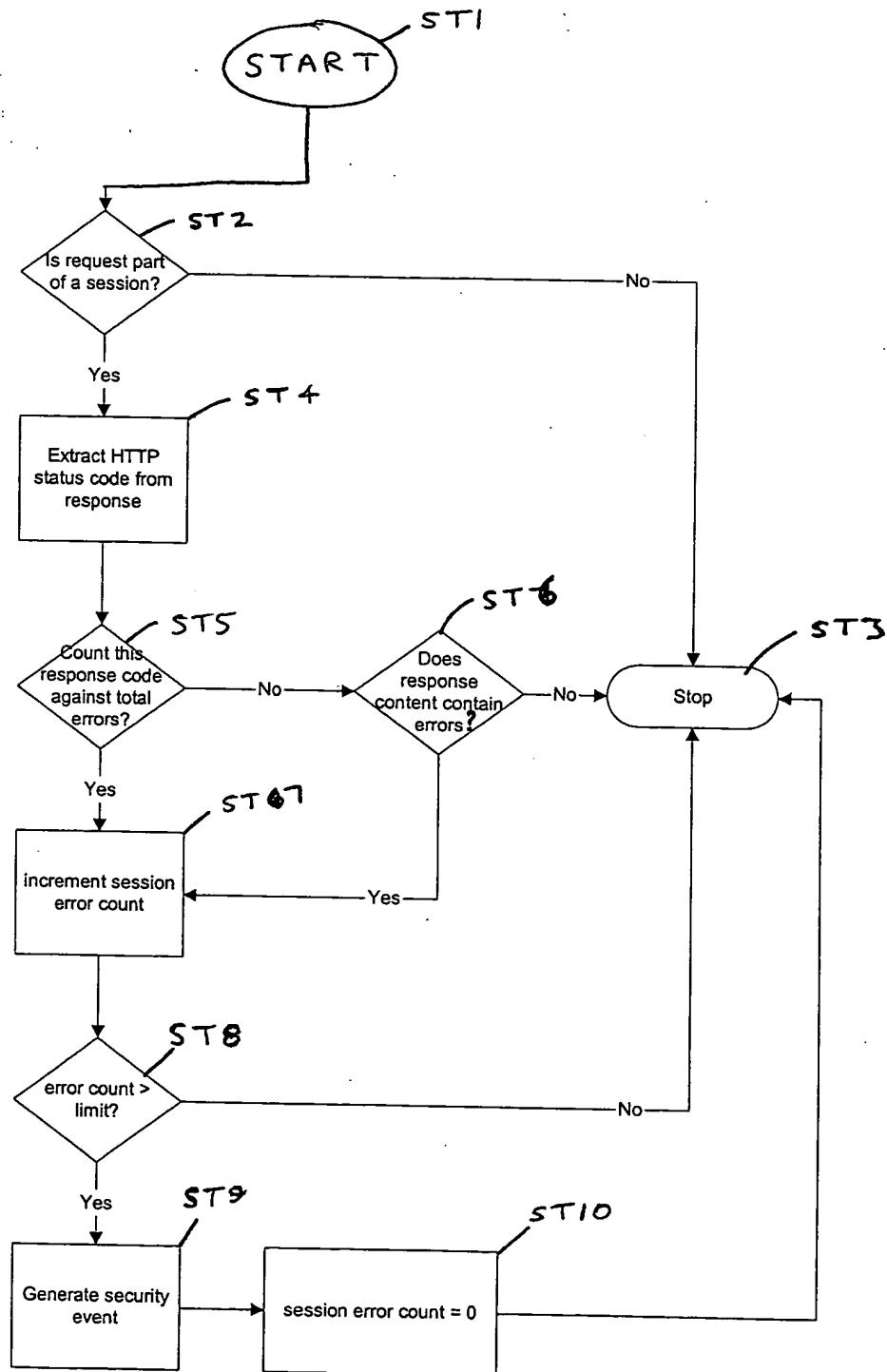


FIG. 27

2700

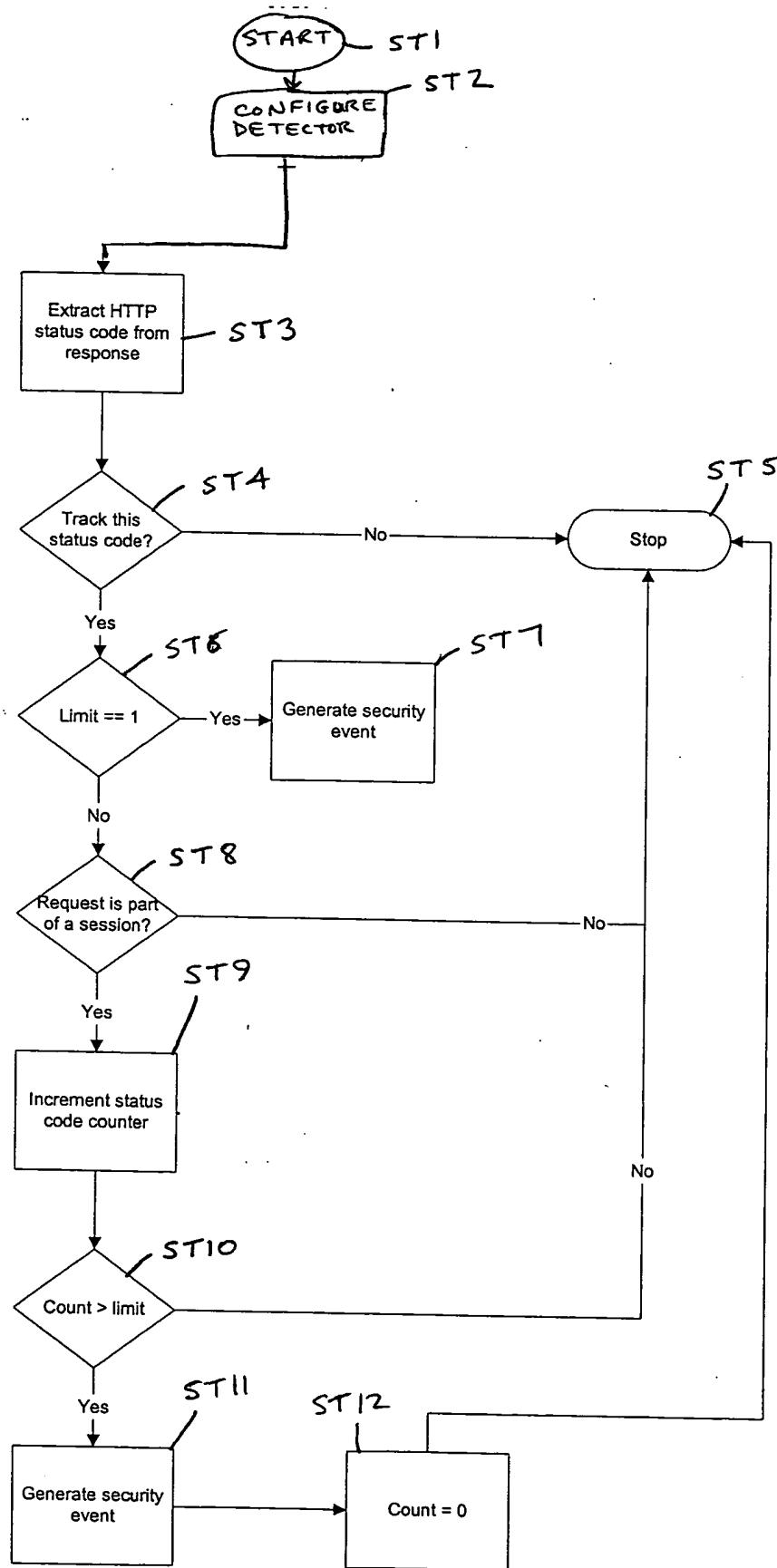


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28.00



FIG. 28



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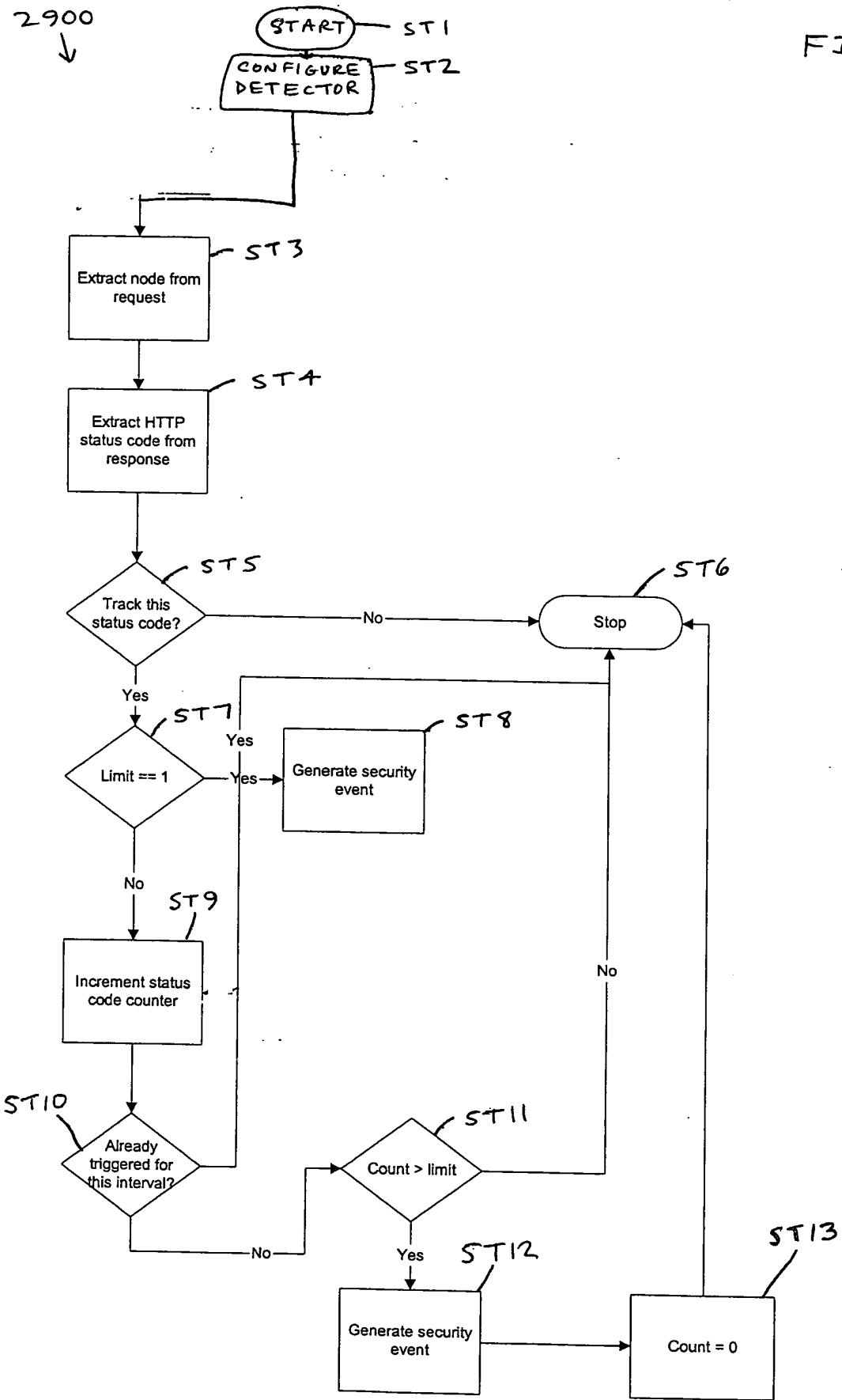
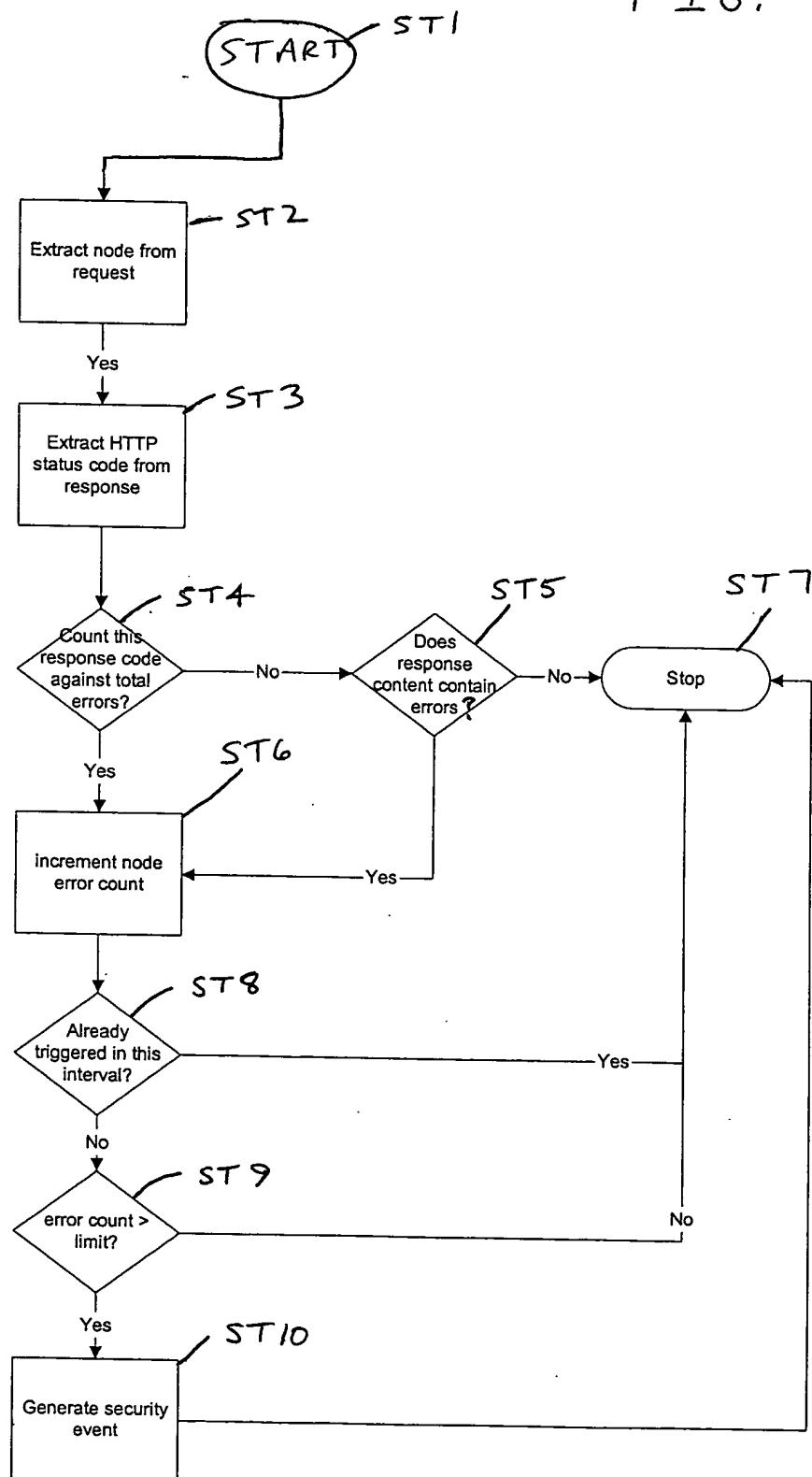


FIG. 29

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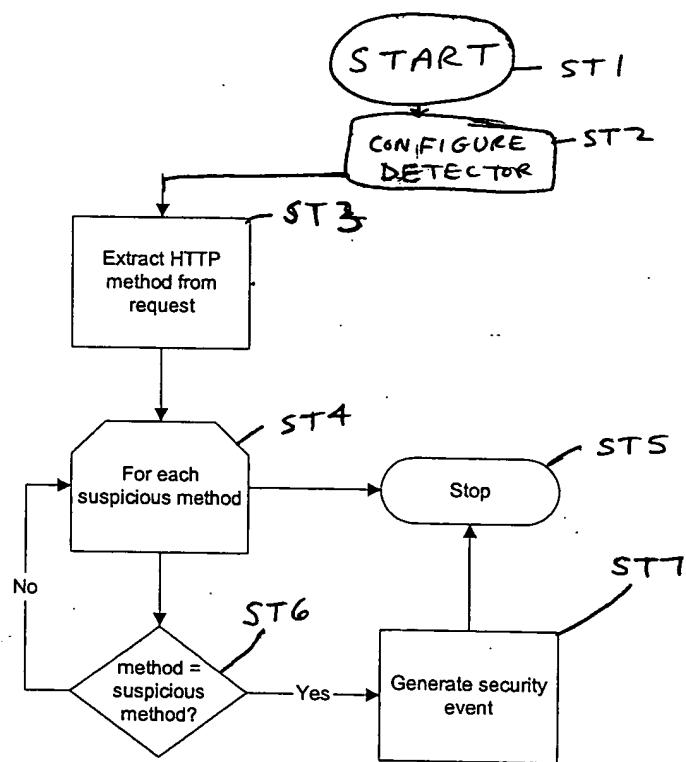
3000

FIG. 30



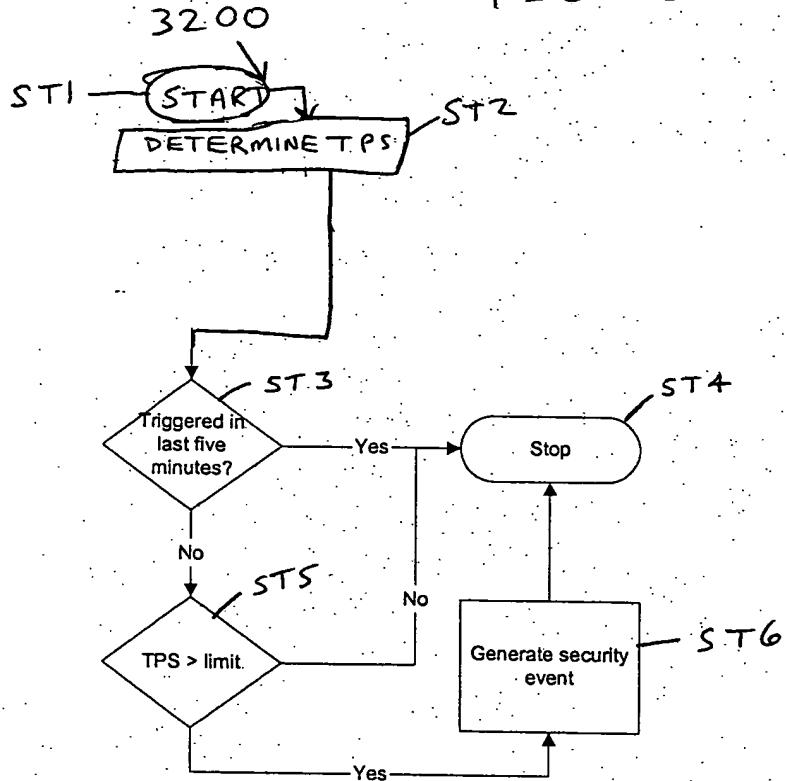
3100  
↓

FIG. 31



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FIG. 32



3300 FIG. 33A.

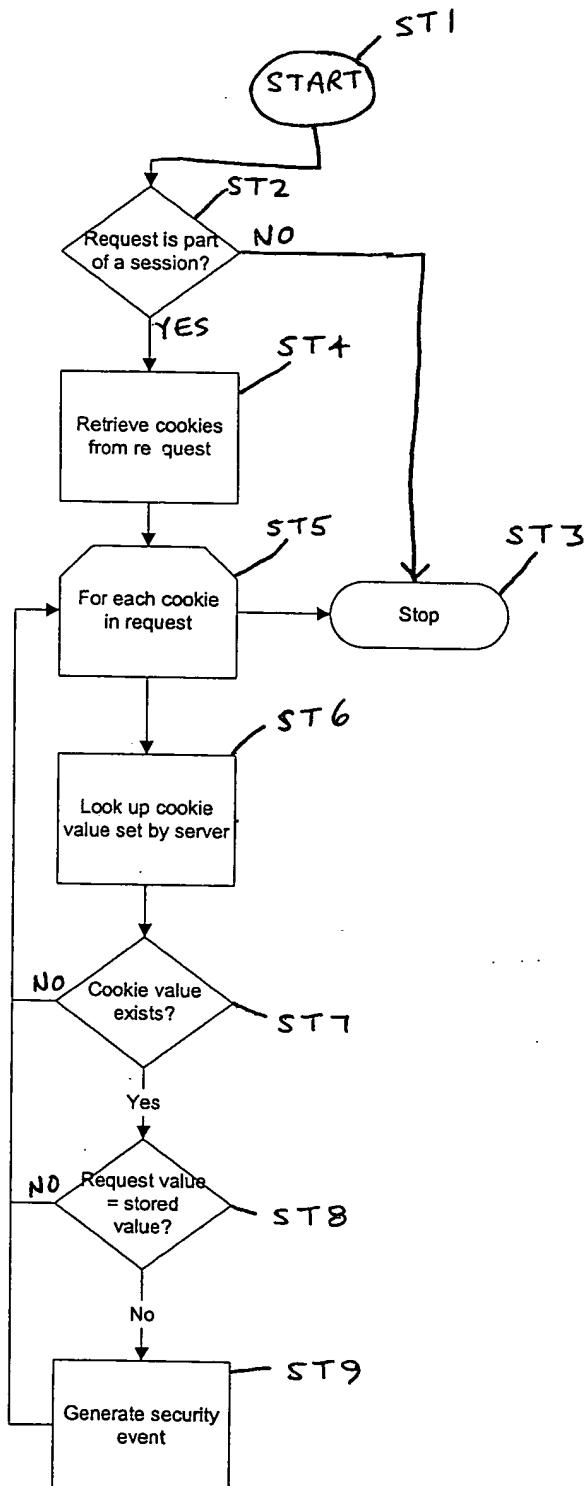


FIG. 33B

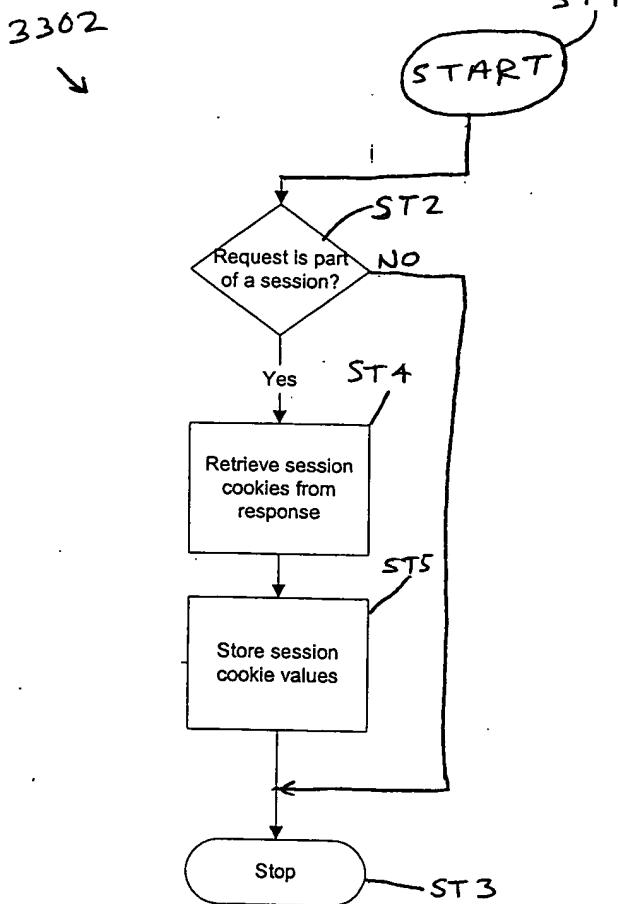


FIG. 34A

3400  
 ↓

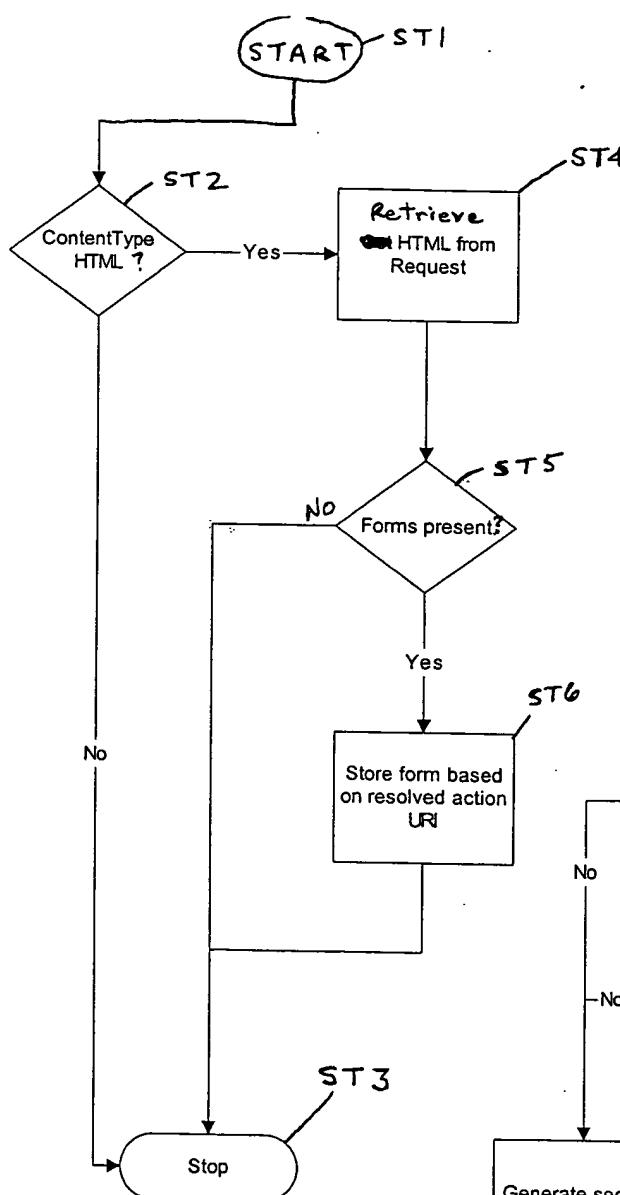
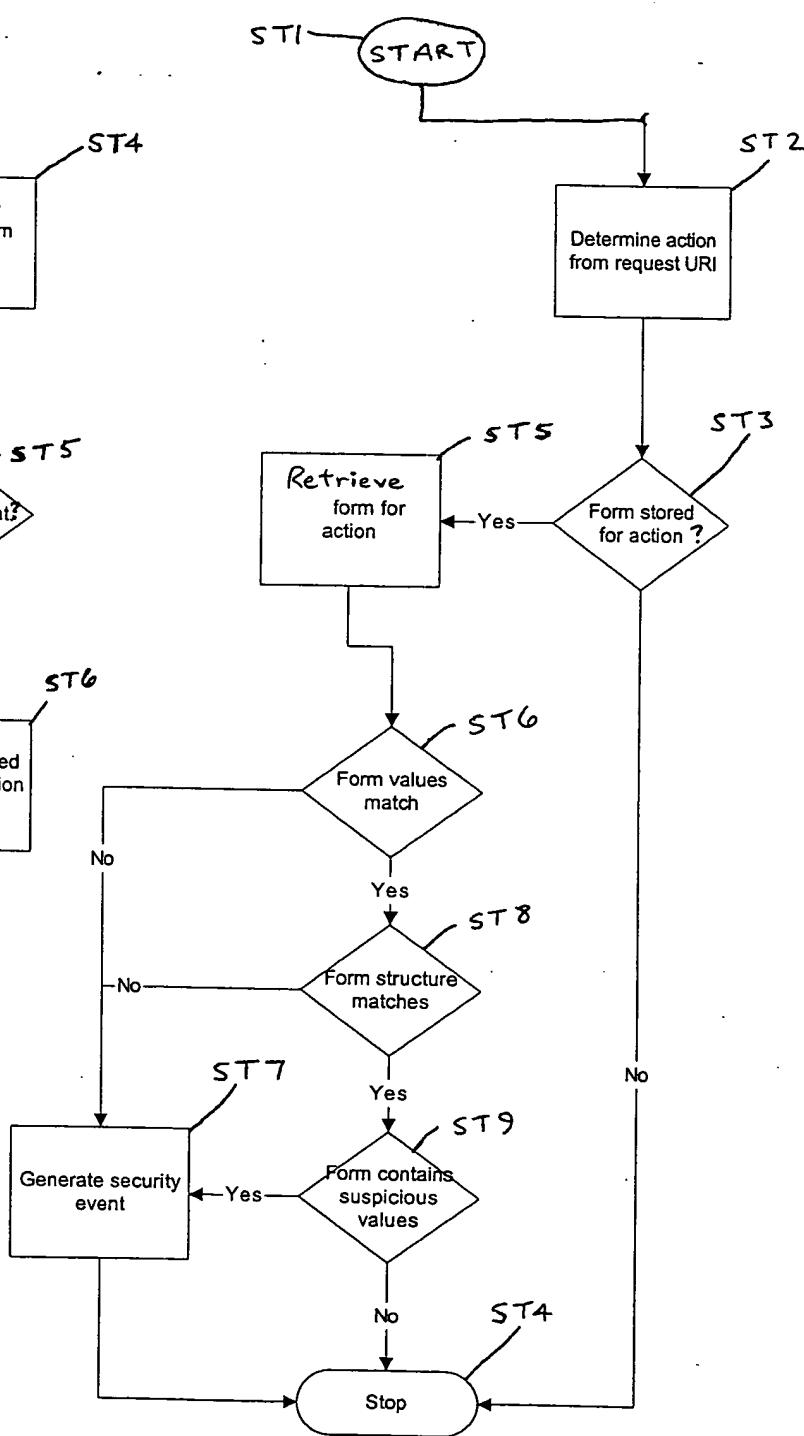


FIG. 34B

3402  
 ↓



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FOR A SERVER APPLICATION  
Atty Docket: 1503/9

FIG. 35

3500

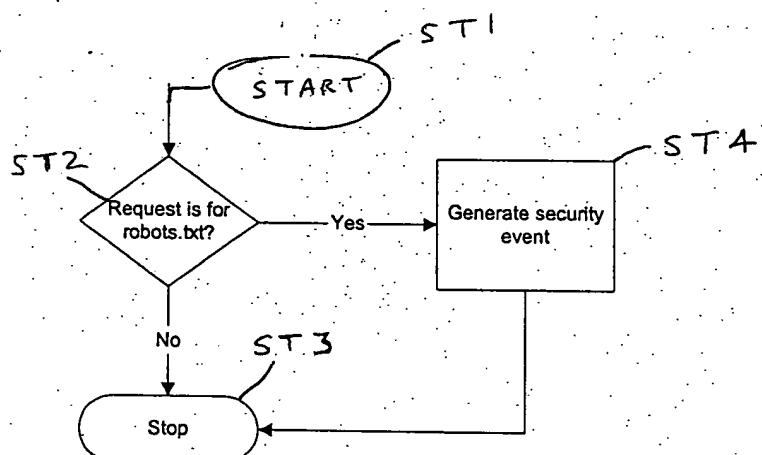


FIG. 36

360°

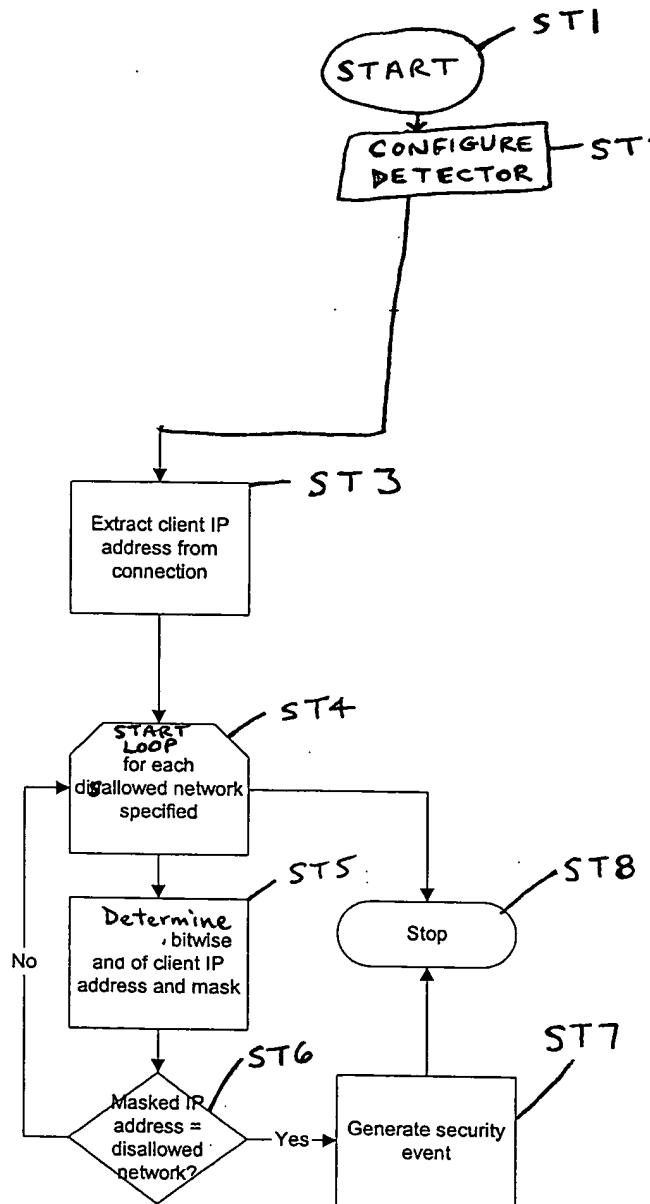


FIG. 37

3700  
↓

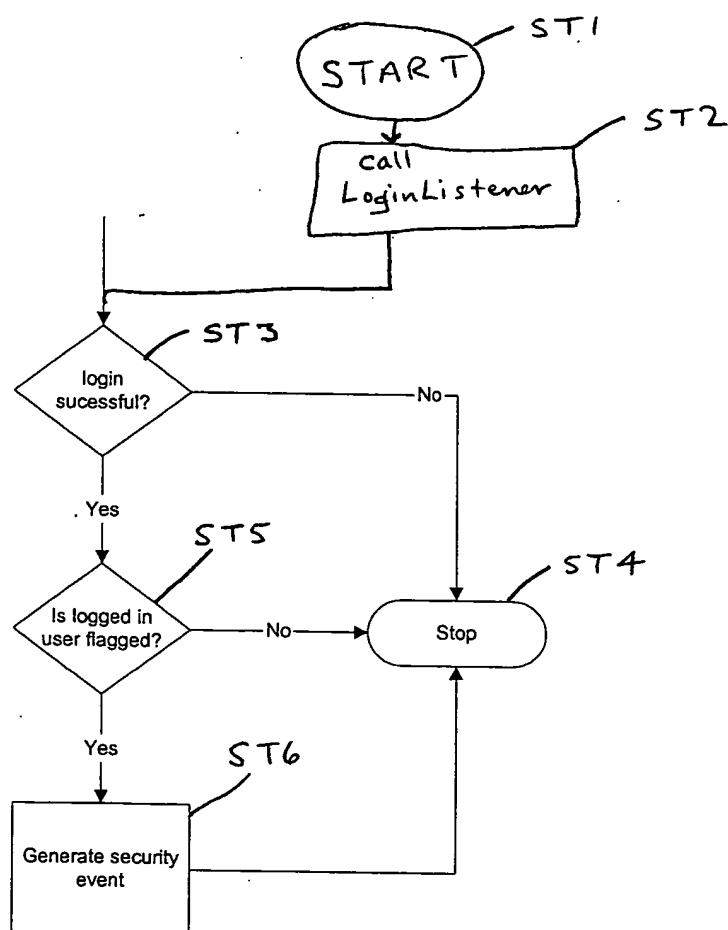
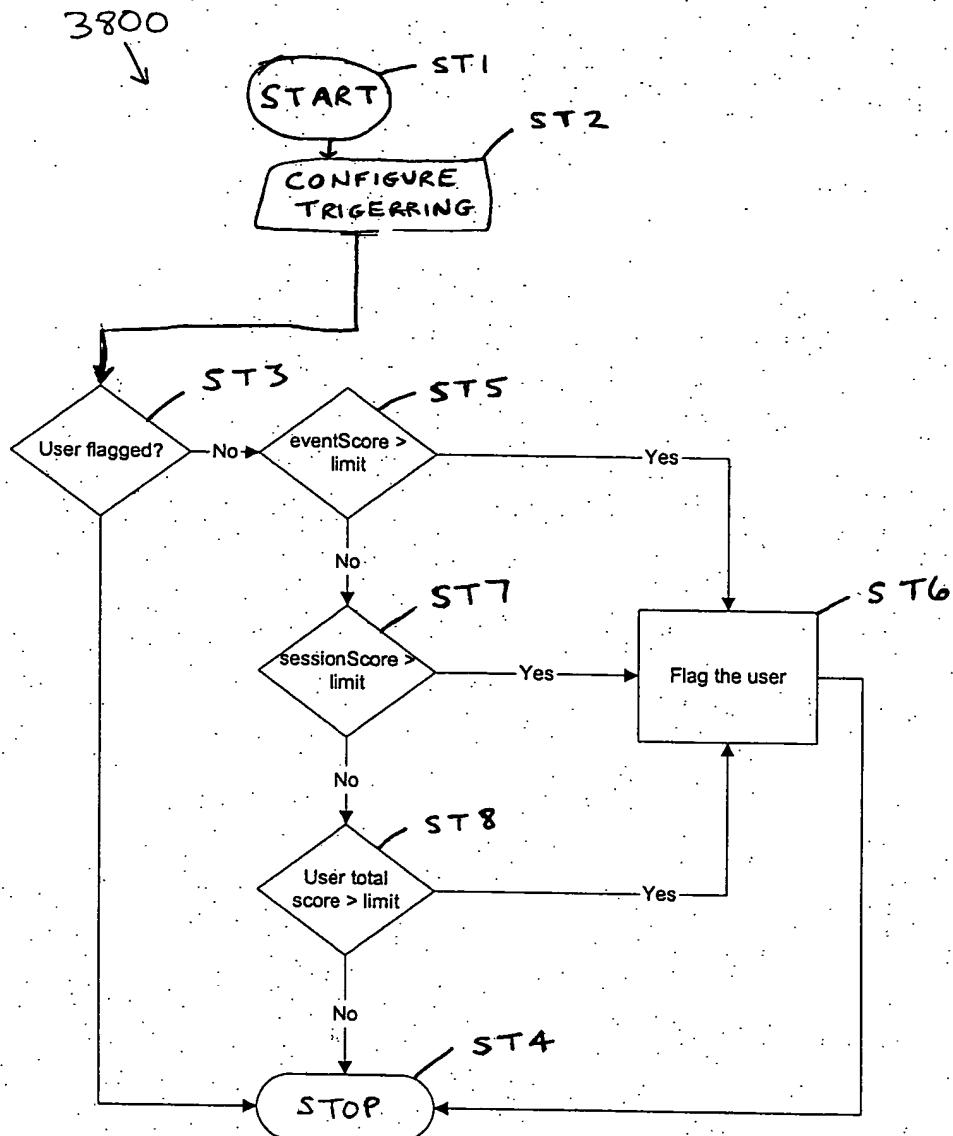


FIG. 38



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F I G.

39

AP { TPS } USER

Summary - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: http://192.168.55.211/main.do?page=page\_summary

Current Page: Summary Operator: virgilw App Score: 3 TPS: 0.7 Users: 20/31 Time: 10:57 AM

covelight systems (application security intelligence)

3902

3910 3912 3914 3916 3920 3922 3924

3904

3904 SES

AI

Monitor Analyze Configure CI

Help About Preferences Logout

SUM Summary Sessions Users Pages Threats

Active Sessions

User	Session	Client	Score
NNPJL...	24.151.41.183	10	
BCAKL...	24.118.140.178	10	
gperez	KAACL...	216.187.239.60	10
kated	ABAKL...	216.187.239.60	10
LNPJL...	205.216.186.2	10	
bsmith	LMPJL...	216.28.152.96	10
	NHBKL...	205.216.186.2	10
lthrash	TEAKL...	216.253.195.146	10
rhelton	LCAKL...	216.187.239.60	10

Active Users

User	Client	Score	Flagged
wallace	24.123.144.98	10	N
rhelton	216.187.239.60	10	N
lthrash	216.253.195.146	10	N
kated	216.187.239.60	10	N
jon	208.61.139.123	10	N
gperez	216.187.239.60	10	N
bsmith	216.28.152.96	10	N
swlms123	68.82.75.6	0	N
sshipton	216.187.239.60	0	N

Pages

URI	Score	Events	Requests
/manual/_DOC.asp	10	1	6
/section/messageDetail.asp	10	1	10
/calendar/calendar.asp	10	1	9
/budget/selectionDetail...	10	1	113
/budget/itemAddMod.asp	10	1	134
/weather/local_radar.asp	0	0	0
/vbs/_utils.vbs	0	0	91
/uploads/weather_data/...	0	0	0
/uploads/weather_data/...	0	0	0

Recent Threats

Time	User	Client	Score
1/16/04 10:52 AM	kated	216.187.239.60	0
1/16/04 10:51 AM	btaylor	24.11.194.43	0
1/16/04 10:51 AM	btaylor	24.11.194.43	0
1/16/04 10:48 AM		195.101.94.101	10
1/16/04 10:42 AM	lthrash	216.253.195.146	10
1/16/04 10:40 AM	lthrash	216.253.195.146	0
1/16/04 10:40 AM	lthrash	216.253.195.146	0
1/16/04 10:39 AM	joshs	216.187.239.60	0
1/16/04 10:39 AM	kated	216.187.239.60	10

3926 3928 3930 3932 3934 3936 3938 3940

3906 3908

Internet

FIG.  
 40A

4000

Sessions - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://192.168.55.211/main.do?page=page\_sessions

Current Page: Sessions Operator: virgilw App Score: 3 TPS: 0.7 Users: 20/31 Time: 10:58 AM

covelight systems (Application security intelligence)

Monitor Analyze Configure

SES USE PAGE THR

SUM Summary Sessions Users Pages Threats

4028 4018 4030 4020 4022 4024 4026

Application Sessions

Refresh Reset Filter

Export SY Export XML

Sessions Status Summary Client Summary Date Summary

Showing 1-15 of 500 (1.95 Total Page)

User	Session ID	Threat score ▼	Start time	Requests	Client	Server
Hank.Cyndy	MCBKLCADGOMEPMBJD...	100	1/15/04 8:35 PM	11	205.188.208.168	192.168.2.19
Hank.Cyndy	MCBKLCADGOMEPMBJD...	100	1/16/04 2:13 AM	11	205.188.208.168	192.168.2.19
Hank.Cyndy	MCBKLCADGOMEPMBJD...	100	1/16/04 7:52 AM	11	205.188.208.168	192.168.2.19
?	LOAKLCADHHFMCOCBO...	90	1/16/04 7:19 AM	50	68.118.56.35	192.168.2.19
?	LOAKLCADHHFMCOCBO...	80	1/16/04 1:40 AM	50	68.118.56.35	192.168.2.19
?	LOAKLCADHHFMCOCBO...	80	1/15/04 8:01 PM	50	68.118.56.35	192.168.2.19
kated	AEAKLCADBJNMCLKI...	70	1/16/04 4:55 AM	691	216.187.239.60	192.168.2.19
kated	AEAKLCADBJNMELKI...	60	1/15/04 11:17 PM	691	216.187.239.60	192.168.2.19
?	JCBKLCADCCBPNCNP...	50	1/16/04 2:13 AM	4	205.188.209.78	192.168.2.19
?	JUBKLCADHMGBMKFFC...	50	1/15/04 8:45 PM	7	64.12.96.42	192.168.2.19
?	ECBKLCADBLIHNMFPA...	50	1/16/04 7:48 AM	17	198.81.26.40	192.168.2.19
?	NBBKLCADABKLPGMG...	50	1/16/04 7:42 AM	2	198.81.26.125	192.168.2.19
?	NBBKLCADABKLPGMG...	50	1/16/04 2:03 AM	2	198.81.26.175	192.168.2.19
?	LAALKLCADITEHPDGPI...	50	1/16/04 12:32 AM	1	192.169.49.24	192.168.2.19
?	ECBKLCADBLIHNMFPA...	50	1/16/04 2:09 AM	17	198.81.26.40	192.168.2.19

4001 4006 4008 4010 4012 4014 4016

4002

Internet

FIG. 40B

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Session - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Web Favorites Favorites Search Média

Address http://192.168.55.171/page\_sessions.do?mid=page\_sessions\_cardmanager\_card-method\_tab

Google

Blocked Autonavi 5 Options

Go Links Norton Antivirus

Current Page: Sessions Operator: admin App Score: 0 TPS: 0 Users: 0/12772 Time: 2:34 AM

Help About Preferences Logout

Dashboard Sessions Users Pages Threats

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application security intelligence

Application Sessions

Refresh Reset Filter

Sessions Activity Summary Threat Summary Date Summary

Activity Threat Index Session Count Total Threat Score

Activity	Threat Index	Session Count	Total Threat Score
Completed	100%	13226	7720

Internet

F I G. 4 OC

4034

Sessions - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back

Address http://192.168.55.171/page\_sessions.do?mid=page\_sessions\_cardmanager\_cards-clients\_tab

Google

Current Page: Sessions Operator: admin App Score: 0 TPS: 0 Users: 0/127/72 Time: 2:35 AM

Help | About | Preferences | Logout

Dashboard Sessions Users Pages Threats

**covelight systems**  
application security intelligence

Monitor Analyze Configure

Application Sessions

Refresh Reset Filter

Sessions Activity Summary Client Summary Date Summary

Address: Classification Grouping:  O  C

Threat Index Session Count Session Duration Threat Score

Client	Threat Index	Session Count	Session Duration	Threat Score
192.168.50.*	100%	1226	7720	72
0.0.0.0	0%	32000	10000	100

Internet

FIG. 40D

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Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back - Stop Refresh Favorites Search Favorites Media

Address: http://192.168.55.171/page\_sessions.do?cmd=page\_sessions\_cardmanager-card-date\_tab

Google

Session Page: Sessions Operator: admin App Score: 0 TPS: 0 Users: 0/12772 Time: 2:36 AM

covelight systems

application security intelligent

Monitor Analyze Configure

Dashboard Sessions Users Pages Threats

Application Sessions

Refresh Rebuild

Sessions Activity Summary Client Summary Date Summary

Date: 01/01/2010 - 01/31/2010

Session Count: 13226

Total Threat Score: 7720

Date	Threat Index	Threat Score
February 8	100%	7720

Internet

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FIG.

41

4100

Session Detail - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Media Stop Print Mail Home

Address: http://192.168.55.211/page\_sessions.do?rowlink=1074216912834120&tableindex=0&tableid=page\_sessions\_table

Current Page: Sessions / Session Detail Operator: virgilw App Score: 3 TPS: 0.4 Users: 20/31 Time: 11:04 AM

**covelight systems** (application security intelligence)

Monitor Analyze Configure

Help | About | Preferences | Logout

SUM SES USE ) PAG THR

Summary Sessions Users Pages Threats

Session Detail

Session: NGBKLCADGOMEPMBBDMMNCAEON	1/500 Next
User: Hank.Cyndy (Search)	Login Method: Login Form
Start Time: 1/15/04 8:35 PM	Last Accessed Time: 1/15/04 8:36 PM
Client IP Address: 205.188.208.168 (Search)	Server IP Address: 192.168.2.19
Session Threat Score: 100	Request Count: 11
Threats: 4	

[View Transactions](#) [View Threats](#)

4102 4104

Done Internet

FIG.

4200

42

Users - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Media Stop Print Refresh Address http://192.168.55.211/main.do?page=page\_users Go Links Norton AntiVirus

Current Page: Users Operator: virgilw App Score: 3 TPS: 0.5 Users: 20/31 Time: 10:58 AM

covelight systems (application security intelligence)

4222 A22A Monitor Analyze Configure

Help About Preferences Logout

SUM7 SES USE PAG THR

Summary Sessions Users Pages Threats

4226 4228

### Application Users

Refresh Reset Filter Export CSV Export XML

Users	Flagged Summary	Client Summary	Last Login Summary				
wallace	10	10	50	82	13	24.123.144.98	N
rhelton	10	20	40	60	20	216.187.239.60	N
lthrash	10	30	100	520	57	216.253.195.146	N
katied	10	70	80	1382	172	216.187.239.60	N
jon	10	25	50	888	296	208.61.139.123	N
gperez	10	20	40	212	70	216.187.239.60	N
bsmith	10	20	40	258	86	216.28.152.96	N
swims123	0	10	20	124	41	68.32.75.6	N
sshipton	0	10	20	36	12	216.187.239.60	N
scarden	0	10	20	78	26	198.143.244.44	N
scavenger	0	10	30	15	5	216.187.239.60	N
rwarburton	0	40	160	506	46	216.187.239.60	N
mtaylor	0	20	50	598	149	66.180.103.154	N

Reset Delete Search

Internet

4204

4206

4208

4210

4212

4214

4216

4218

4202

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FIG. 43

4300

1

4300

4302 4304

**Users - Microsoft Internet Explorer**

File Edit View Favorites Tools Help

Back Favorites Media

Address http://192.168.55.211/page\_users.do?rowlink=wallace&tableIndex=0&tableId=page\_users\_table Go Links Norton AntiVirus

Current Page: **Users / User Detail** Operator: **virgilw** App Score: 3 TPS: 0.2 Users: 20/31 Time: 11:05 AM

**covelight systems** application security intelligence

**Monitor** **Analyze** **Configure**

Help | About | Preferences | Logout

**SUM** **SES** **USE** **PAG** **THR**

Summary | Sessions | Users | Pages | Threats

**User Detail**

User: <b>wallace</b>	1/31	(Next)
Current Threat Score:	<b>10</b>	Last Login Time: <b>1/16/04 9:33 AM</b>
Average Session Score:	<b>8</b>	Longest Session Duration: <b>1m 36s</b>
Highest Session Score:	<b>10</b>	Average Session Duration: <b>52 s</b>
Total Threat Score:	<b>50</b>	Total Session Time: <b>5m 13s</b>
Total Threat Count:	<b>11</b>	Last Client IP Address: <b>24.123.144.98</b> (Search)
Total HTTP Requests:	<b>82</b>	Last Server IP Address: <b>192.168.2.19</b>
Average HTTP Requests Per Session:	<b>13</b>	Active Sessions: <b>2</b>
Last Reset:	<b>Never</b>	Total Sessions: <b>6</b>

**View Transactions** **View Threats**

Flagged:  Notes:  **Apply**

Done Internet



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FIG.

45

4500

4500

4502 4504

Page Detail - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Favorites Media

Address: http://192.168.55.211/page\_nodes.do?rowlink=%2Fmanual%2F\_DOC.asp&tableIndex=0&tableId=page\_nodes\_table Go Links Norton AntiVirus

Current Page: Pages / Page Detail Operator: virgillw App Score: 3 TPS: 1.2 Users: 20/31 Time: 11:05 AM

covelight systems (application security intelligence) Help | About | Preferences | Logout

SUM SES USE PAG THR

Summary Sessions Users Pages Threats

**Page Detail**

Page: /manual/\_DOC.asp 1/252 Next>

Content-Type: text/html (Search)	Max Interval Score: 10
Total Score: 30	Interval Score: 0
Total Threat Count: 3	Interval Threat Count: 0
Total Request Count: 68	Interval Request Count: 0
Average Score: 1	Average Response Time: 0
Interval Count: 19	Previous Interval Score: 10
Last Accessed: 1/16/04 10:16 AM	

Flagged:  Apply

Last Reset: Never Current Interval Ends At: 1/16/04 12:00 PM

Done Internet

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 Atty Docket: 1503/9

FIG.

4600

46A

1

Threats - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Media Mail Links Norton AntiVirus

Address: http://192.168.55.211/main.do?page=page\_events

Current Page: Threats Operator: virgilw App Score: 3 TPS: 0.5 Users: 20/31 Time: 10:58 AM

Help About Preferences Logout

Summary Sessions Users Pages Threats

covelight systems (application security intelligence)

4618 4620 4622 4624 4626 4628 4630

4604 4606 4608 4610 4612 4614 4616

4602

4600

46A

4626 SUM SES USE PAGE THR

4624 Threats

Refresh Reset Filter Export CSV Export XML

Threats Detector Summary Page Summary Client Summary Server Summary Date Summary

Showing 1-16 of 104 (104 Total Items)

Timestamp	Score	Detector	Request URI	User	Flagged	Client
1/15/04 11:53 PM	20	Simultaneous login	/project/project.asp	rwarburton	N	216.187.239.60
1/15/04 11:45 PM	10	Login time does not match acceptable window	/auth/login.asp	rwarburton	N	65.140.140.189
1/15/04 11:45 PM	0	User login	/auth/login.asp	rwarburton	N	65.140.140.189
1/15/04 11:35 PM	10	Login time does not match acceptable window	/auth/login.asp	katied	N	216.187.239.60
1/15/04 11:35 PM	0	User login	/auth/login.asp	katied	N	216.187.239.60
1/15/04 11:33 PM	10	Login time does not match acceptable window	/auth/login.asp	btaylor	N	24.11.194.43
1/15/04 11:33 PM	0	User login	/auth/login.asp	btaylor	N	24.11.194.43
1/15/04 11:33 PM	10	Login time does not match acceptable window	/auth/login.asp	btaylor	N	24.11.194.43
1/15/04 11:33 PM	0	User login	/auth/login.asp	btaylor	N	24.11.194.43
1/15/04 11:31 PM	10	Web crawler	/robots.txt	?	N	195.101.94.101
1/15/04 11:23 PM	10	Login time does not match acceptable window	/auth/login.asp	lthrash	N	216.253.195.146
1/15/04 11:23 PM	0	User login	/auth/login.asp	lthrash	N	216.253.195.146
1/15/04 11:23 PM	10	Login time does not match acceptable window	/auth/login.asp	lthrash	N	216.253.195.146
1/15/04 11:23 PM	0	User login	/auth/login.asp	lthrash	N	216.253.195.146
1/15/04 11:22 PM	10	Login time does not match acceptable window	/auth/login.asp	josh	N	216.187.239.60

Internet

FIG. 46B 4632

File Edit View Favorites Tools Help

Back Address  Google Go

Current Page: Threats Operator: admin App Score: 0 TPS: 0 Users: 0/12772 Time: 2:37 AM

Card manager systems

Search Web 1 blocked Options

Dashboard Sessions Users Pages Threats

Export CSV Export XML

## Threats

Threat Type	Severity	Count
Too many individual page errors in interval	Severe	36067
Session expired without logout	Medium	772
Application request rate too high	Medium	2
Too many total page errors in interval	Medium	2
Abnormal node error rate	Medium	2
User login	Low	887
	Low	0

Refresh

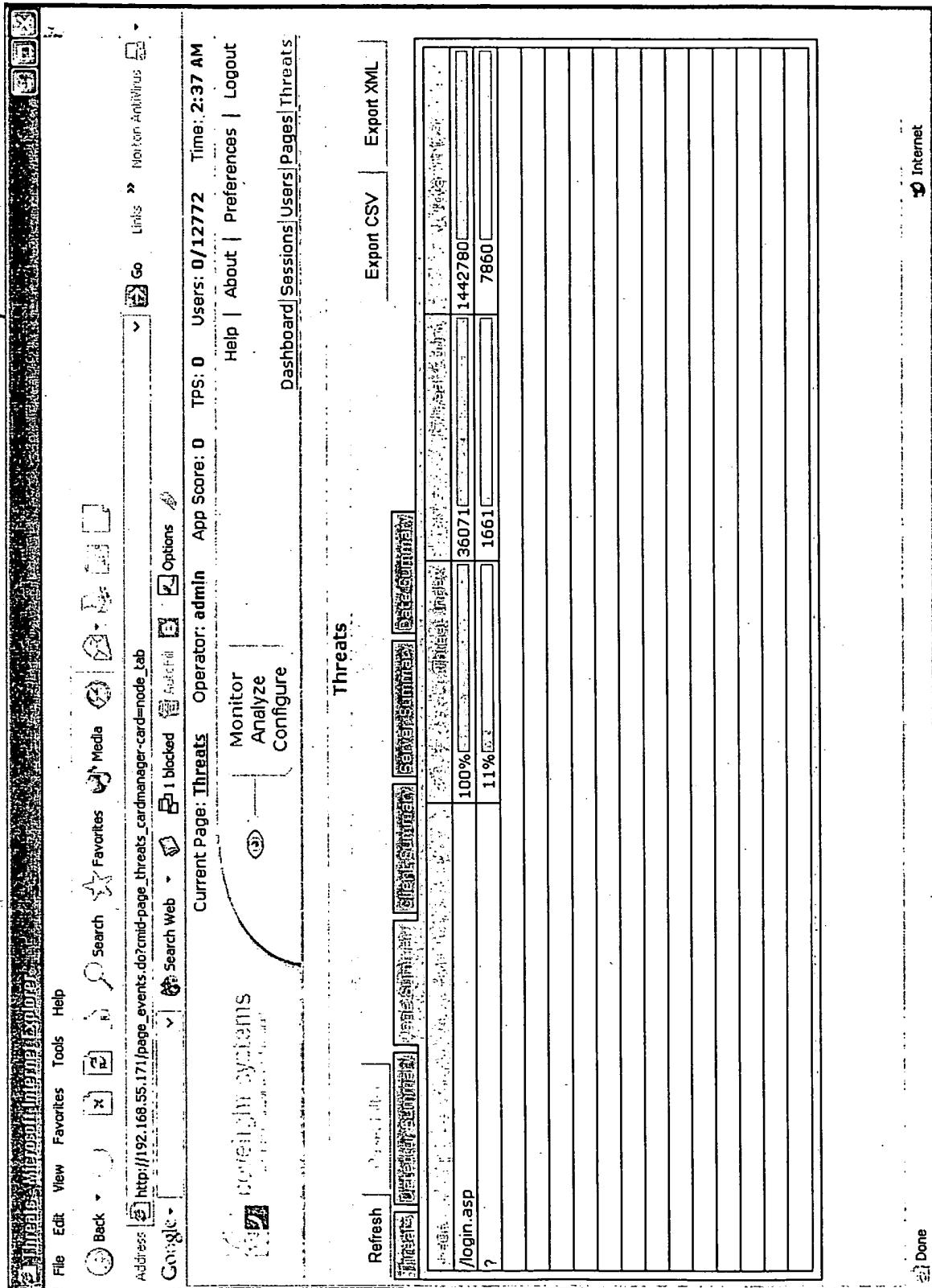
Internet

FIG. 46 C

4634

Title: METHODS, SYSTEMS AND COMPUTER PROGRAM PRODUCTS FOR MONITORING PROTOCOL RESPONSES FOR A SERVER APPLICATION  
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### FIG. 46 D

4636

**Title: METHODS, SYSTEMS AND COMPUTER PROGRAM PRODUCTS FOR MONITORING PROTOCOL RESPONSES FOR A SERVER APPLICATION**

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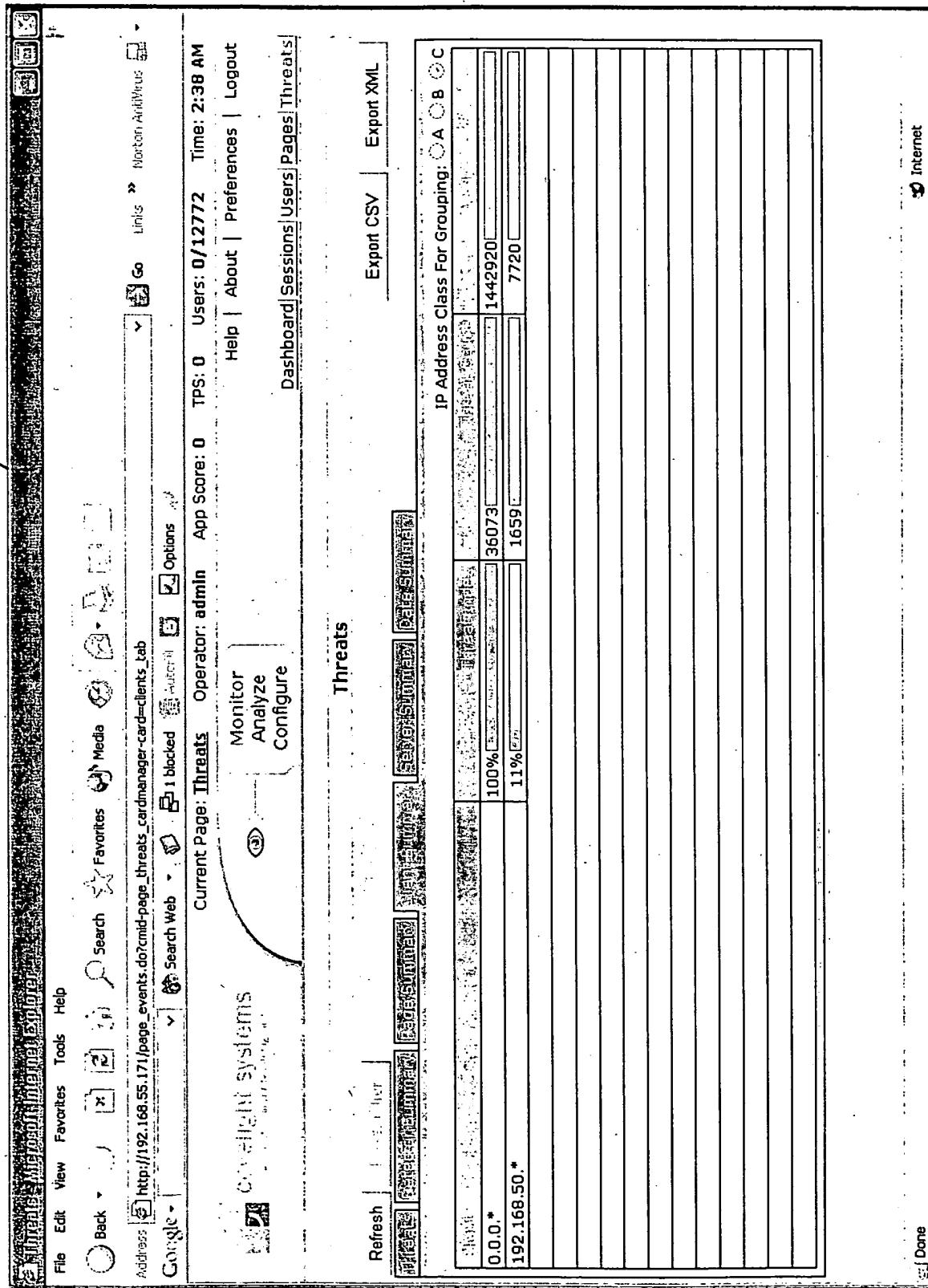


FIG. 46 E

4638

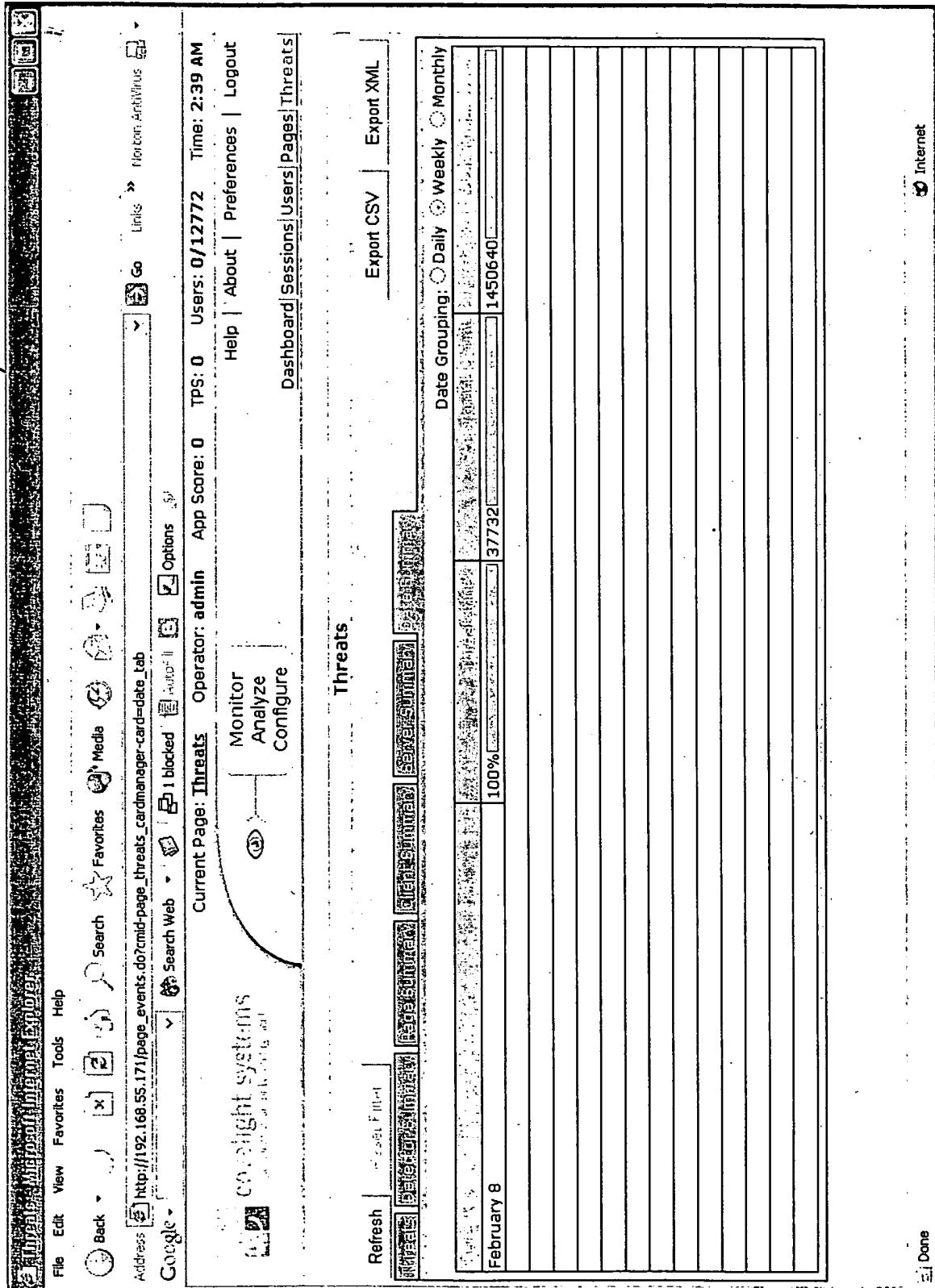
**Title: METHODS, SYSTEMS AND COMPUTER PROGRAM PRODUCTS FOR MONITORING PROTOCOL RESPONSES FOR A SERVER APPLICATION**

FOR A JUDGE  
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FIG. 46F 4640

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FOR A SERVER APPLICATION  
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F I G .

4700 47

Threat Detail - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Favorites Media Go Links Norton AntiVirus

Address: http://192.168.55.211/page\_events.do?rowlink=107422878814103&tableIndex=0&tableId=page\_threats\_table

Current Page: Threats / Event Detail Operator: virgilw App Score: 3 TPS: 0.4 Users: 20/31 Time: 11:06 AM

covelyt systems (application security intelligence) Help | About | Preferences | Logout

SUM SES USE PAG THR  
Summary Sessions Users Pages Threats

Threat Detail

1/104 Next >

Timestamp:	1/15/04 11:53 PM
Threat score:	20
Detector:	Simultaneous login (Search)
Description:	User is logged in twice on different sessions.
Request URI:	/project/project.asp (Search)
User:	rwarburton (Search)
Flagged:	<input type="checkbox"/>
Session ID:	LDAKLCADCGIHMKMTCHJKHPL0 (Search)
Client IP address:	216.187.239.60 (Search)
Server IP address:	192.168.2.19.60 (Search)

Internet

FIG. 48

4800

Transactions - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: http://192.168.55.211/main.do?page=page\_bns

Current Page: Transactions Operator: virgilw App Score: 3 TPS: 0.2 Users: 20/31 Time: 11:00 AM

Monitor MI Help About Preferences Logout  
 Analyze AI 4836 4834  
 Configure CI 4830 4832 Transactions Network 4838

4822 4824 4826 4828 4829 4830 4832 4834 4836 4838

Transactions

Refresh Reset Filter Export CSV Export XML

Transactions Method Summary Client Summary Page Summary Status Summary Content-Type Summary Server Summary Date Summary

Showing 1-15 of 1000 (2002 Total Items)

Method	URI	User	Status	Content Length	Content Type	Threat Score	Timestamp	Response Time
GET	/	?	302	135	text/html	0	1/16/04 11:00 AM	6
GET	/images/addloc.gif	?	200	1656	image/gif	0	1/16/04 11:00 AM	2
GET	/images/additem.gif	?	200	1529	image/gif	0	1/16/04 11:00 AM	0
GET	/images/selectsum.gif	?	200	2079	image/gif	0	1/16/04 11:00 AM	0
GET	/images/rt_tabnotch.gif	?	200	49	image/gif	0	1/16/04 11:00 AM	0
GET	/images/lt_tabnotch.gif	?	200	48	image/gif	0	1/16/04 11:00 AM	0
GET	/images/s.gif	?	200	43	image/gif	0	1/16/04 11:00 AM	0
GET	/js/menu.js	?	200	897	application/x-javascript	0	1/16/04 11:00 AM	0
GET	/vbs/_utils.vbs	?	200	956	text/vbscript	0	1/16/04 11:00 AM	0
GET	/js/modal.js	?	200	421	application/x-javascript	0	1/16/04 11:00 AM	0
GET	/js/utl.js	?	200	5608	application/x-javascript	0	1/16/04 11:00 AM	3
GET	/js/_const.js	?	200	200	application/x-javascript	0	1/16/04 11:00 AM	0
GET	/include/builder_styles/_stylemain.css	?	200	12924	text/css	0	1/16/04 11:00 AM	0
GET	/budget/itemaddmod.asp	jon	200	5488	text/html	0	1/16/04 11:00 AM	199
GET	/budget/selectionDetail.asp	jon	200	10454	text/html	0	1/16/04 11:00 AM	2026

4804

4802

4806

4808

4810

4812

4814 4816

4818

4820

FIG. 49

4900

Transaction Detail - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Search Favorites Media Stop Print Mail Home

Address: http://192.168.55.211/page\_bns.do?rowlink=107426881090038488&tableIndex=18&tableId=page\_bns\_table Go Links Norton AntiVirus

Current Page: Transactions / Transaction Detail Operator: virgilw App Score: 3 TPS: 0.1 Users: 20/31 Time: 11:07 AM

 covelight systems (application security intelligence) Monitor Analyze Configure Help About Preferences Logout

Transactions Network

Transaction Detail

Timestamp:	1/16/04 11:00 AM	HTTP response:	302 (Search)
Method:	POST (Search)	Content Length:	175
URI:	/budget/itemAddM od.asp (Search)	Content Type:	text/html (Search)
User:	1 (Search)	Server Response Time:	2.8 s
Client IP Address:	66.180.103.154 (Search)	Server IP Address:	192.168.2.19:80 (Search)
Session ID:	2 (Search)	<Previous 19/1000 Next>	

Parameters

Name	Value
lngAttachmentsCount	0
chkInventory	0
lngEventId	
txtItemDesc	co #3
blnNewItem	False
DeleteOneAttachment	
actionType	Save
strWebLink	
lngLocationId	650189281
lngOldProjectId	560003098
oldItemId	
itemId	501077459
txtItemInfo	
lngSelectionId	600052400

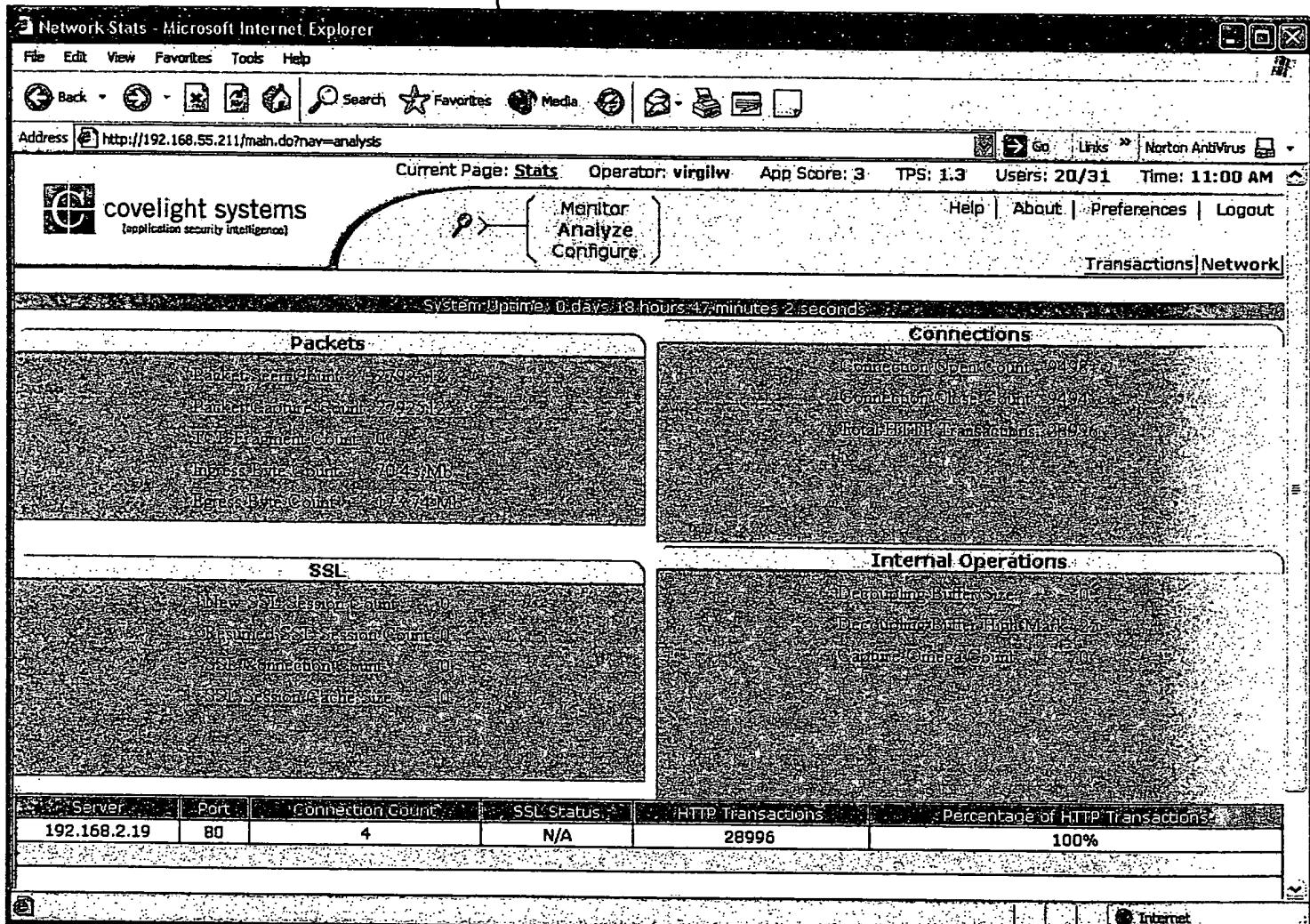
Done Internet

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FIG.

50

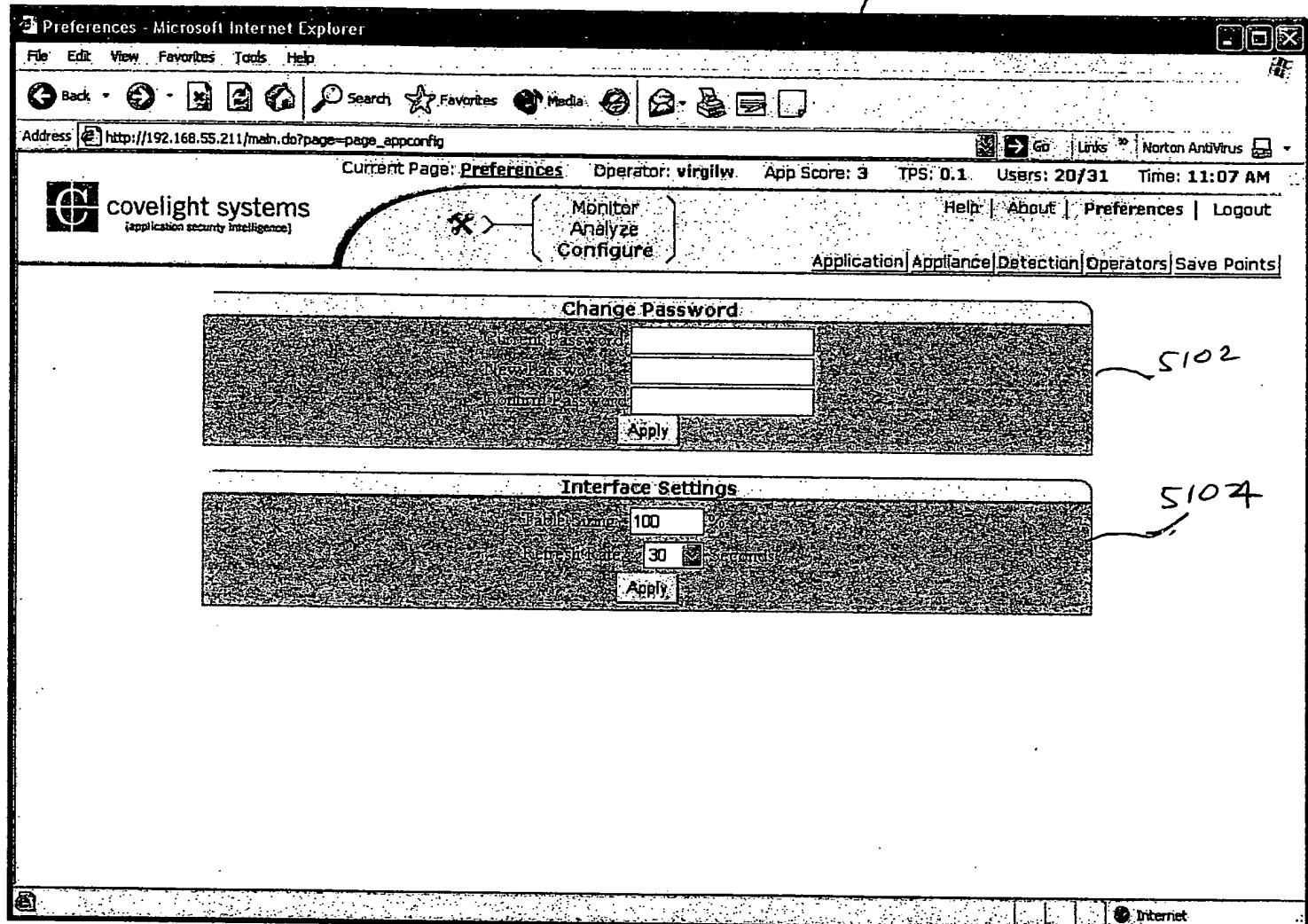
5000



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FIG. 51

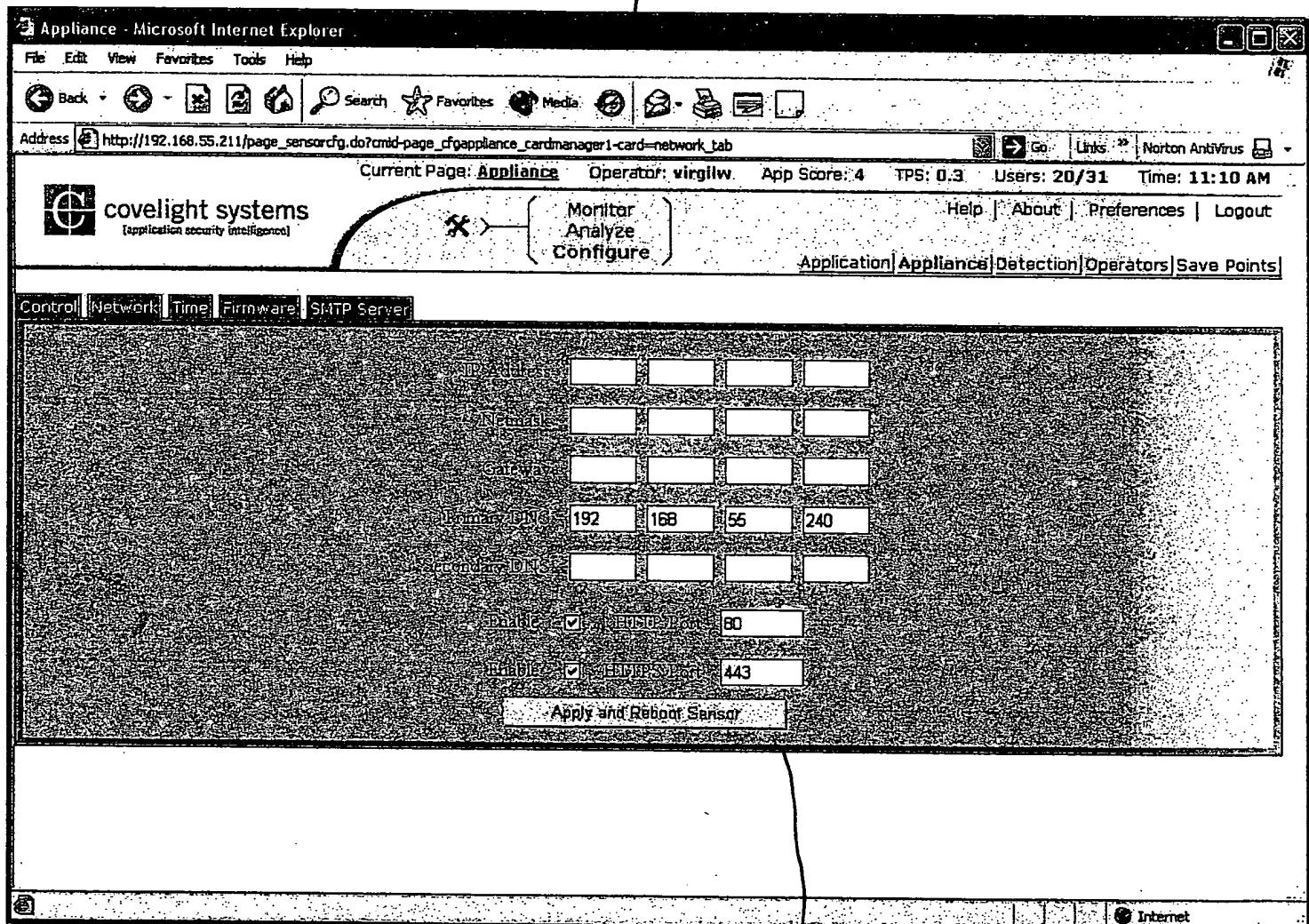
5100



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FIG. 52

520<sup>0</sup>



520<sup>2</sup>

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FIG. 53

5300

Appliance - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://192.168.55.211/page\_sensorcfg.do?cmid=page\_cf0appliance\_cardmanager1-card=smtpserversettings\_tab Go Links Norton AntiVirus

Current Page: Appliance Operator: virgillw App Score: 4 TPS: 1.7 Users: 23/31 Time: 11:28 AM

Help About Preferences Logout

Application Appliance Detection Operators Save Points

Control Network Time Firmware SMTP Server

SMTP Server: mail.invalid.com

Port: 25

Protocol: TCP

From Address: anonymous@invalid.com

From Name: Covelight Sensor

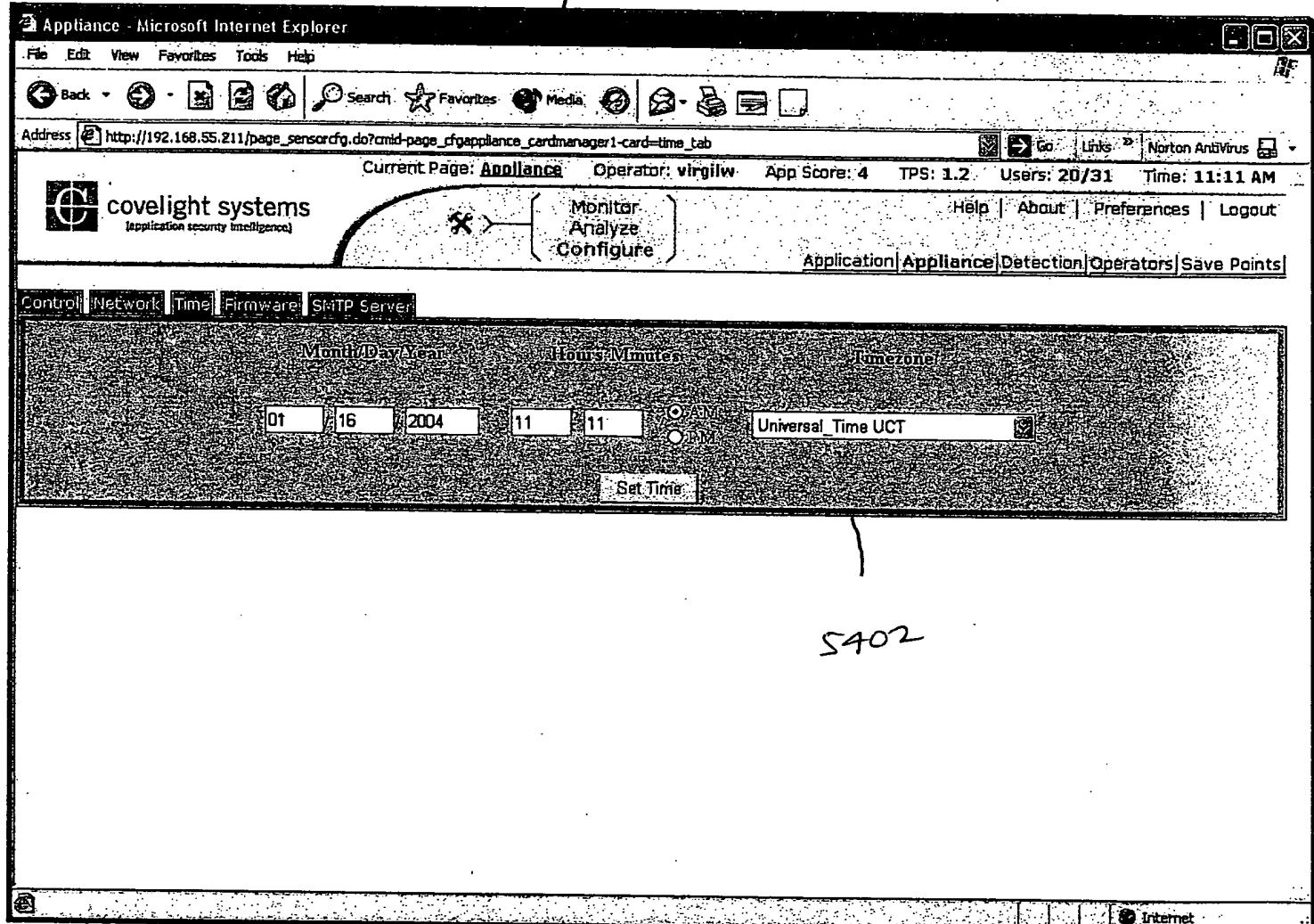
Apply

Internet

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FIG. 54

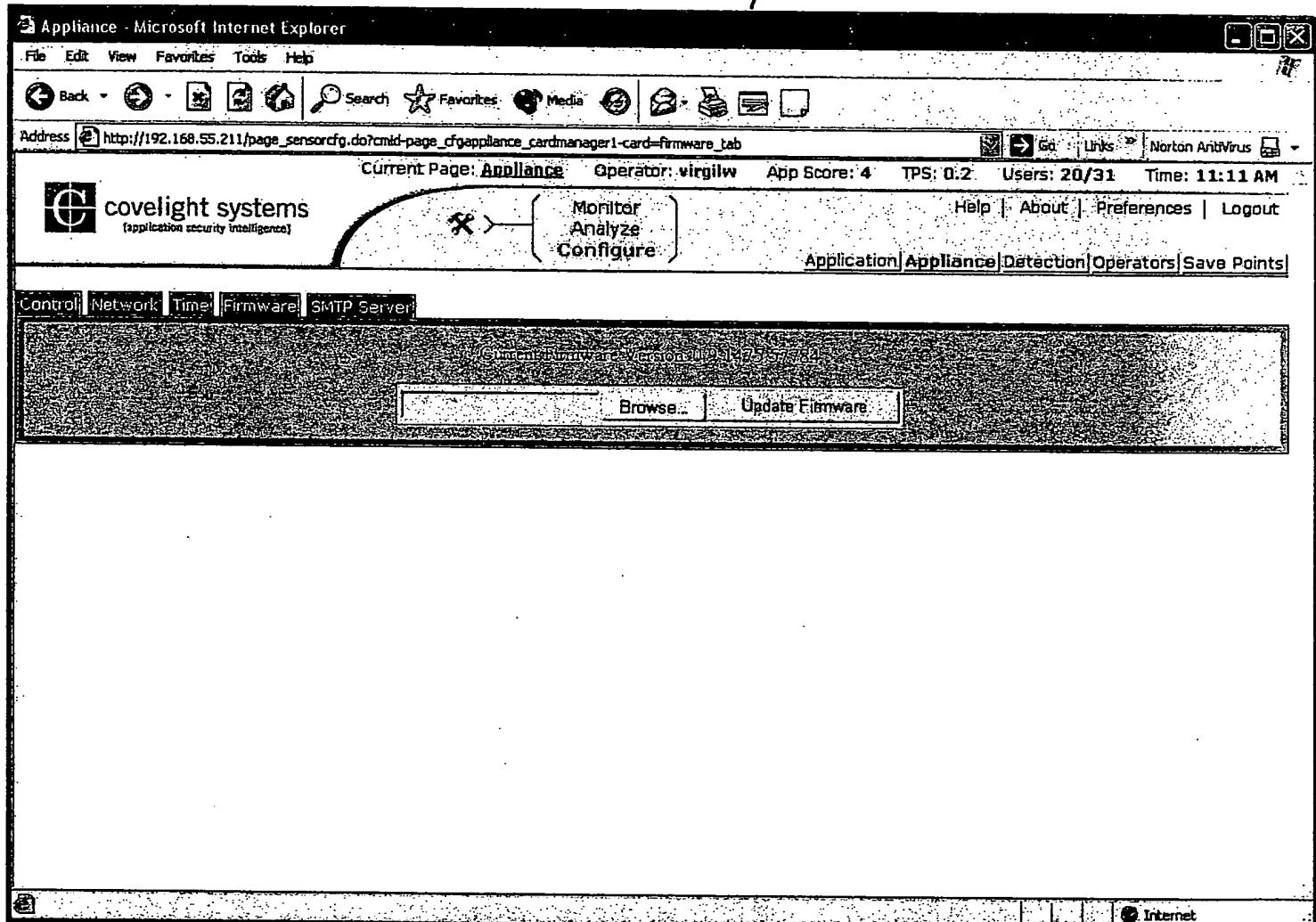
5400



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FIG. 55

5500



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FIG. 56

5600

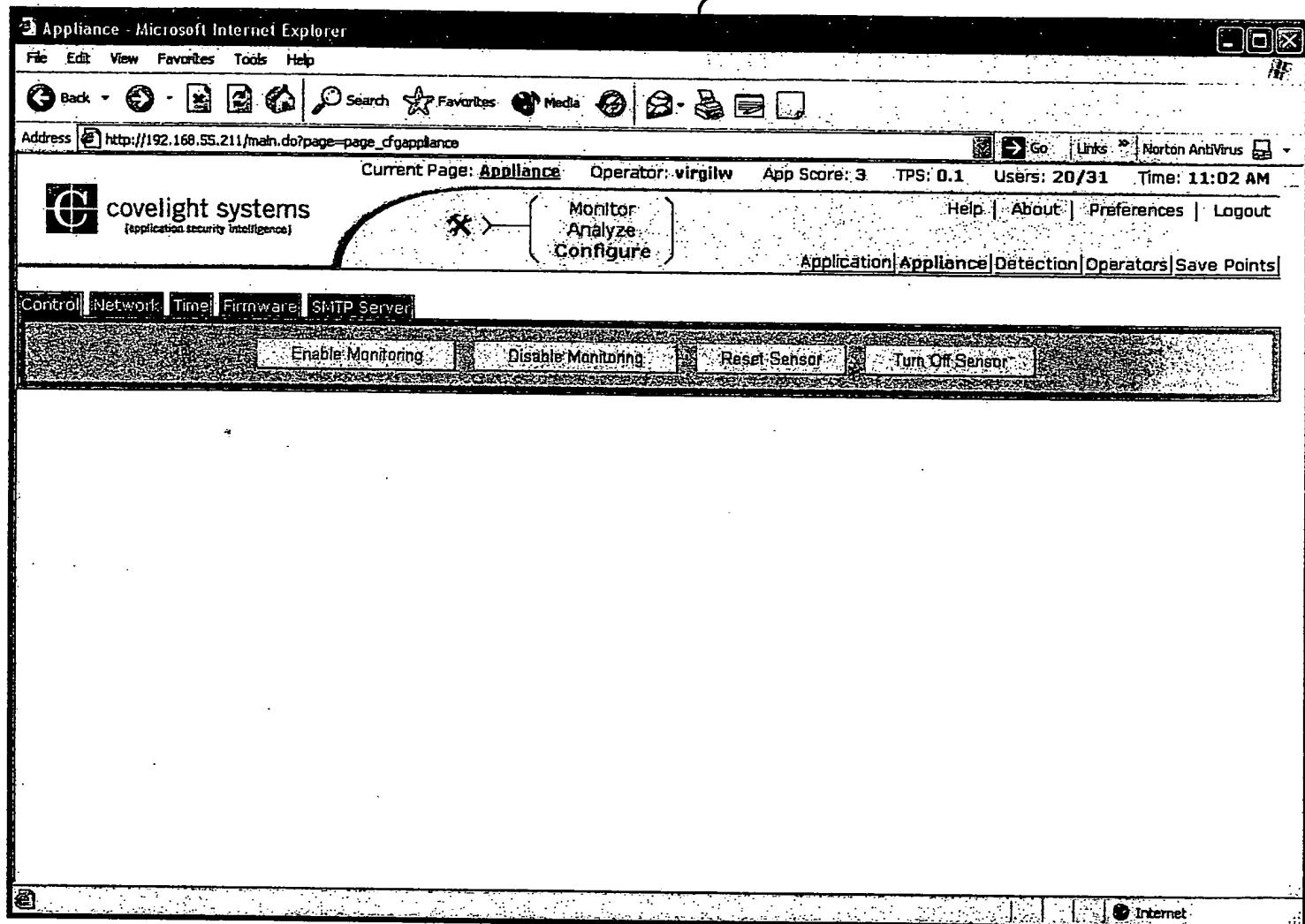


FIG. 57

5700

Application - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://192.168.55.211/page\_monappconfig.do?cmd=page\_cfgapplication\_cardmanager1-card=filters.tab

Current Page: Application Operator: virgilw App Score: 3 TPS: 0.8 Users: 20/31 Time: 11:08 AM

covelight systems (application security intelligence)

Monitor Analyze Configure

Help | About | Preferences | Logout

Application Appliance Detection Operators Save Points

Servers | Filters | Page Recognition | Sessions | Logins

Hosts Included URLs Excluded URLs

5702 5704 5706

Internet

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FIG. 58

5800

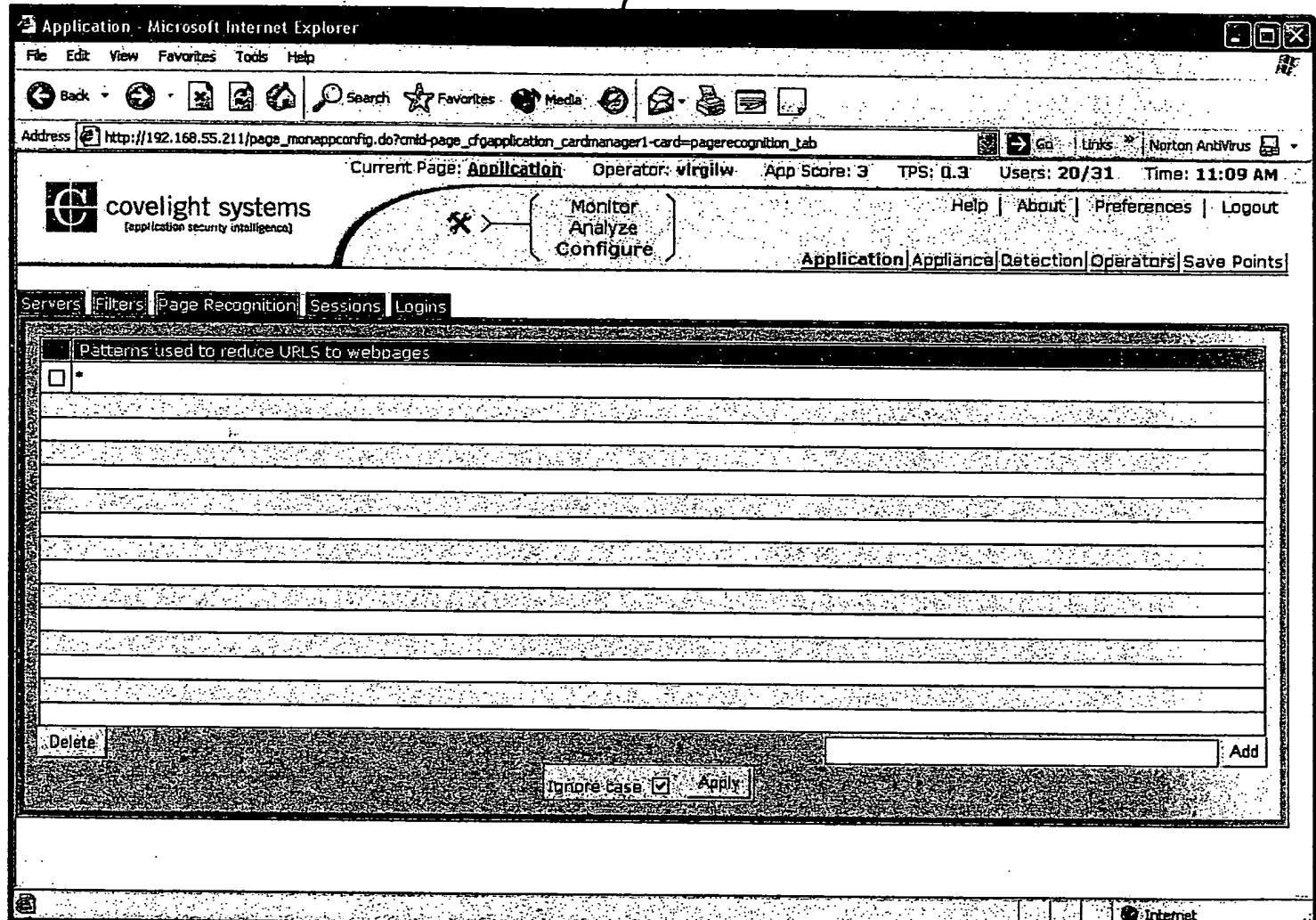


FIG. 59

5900

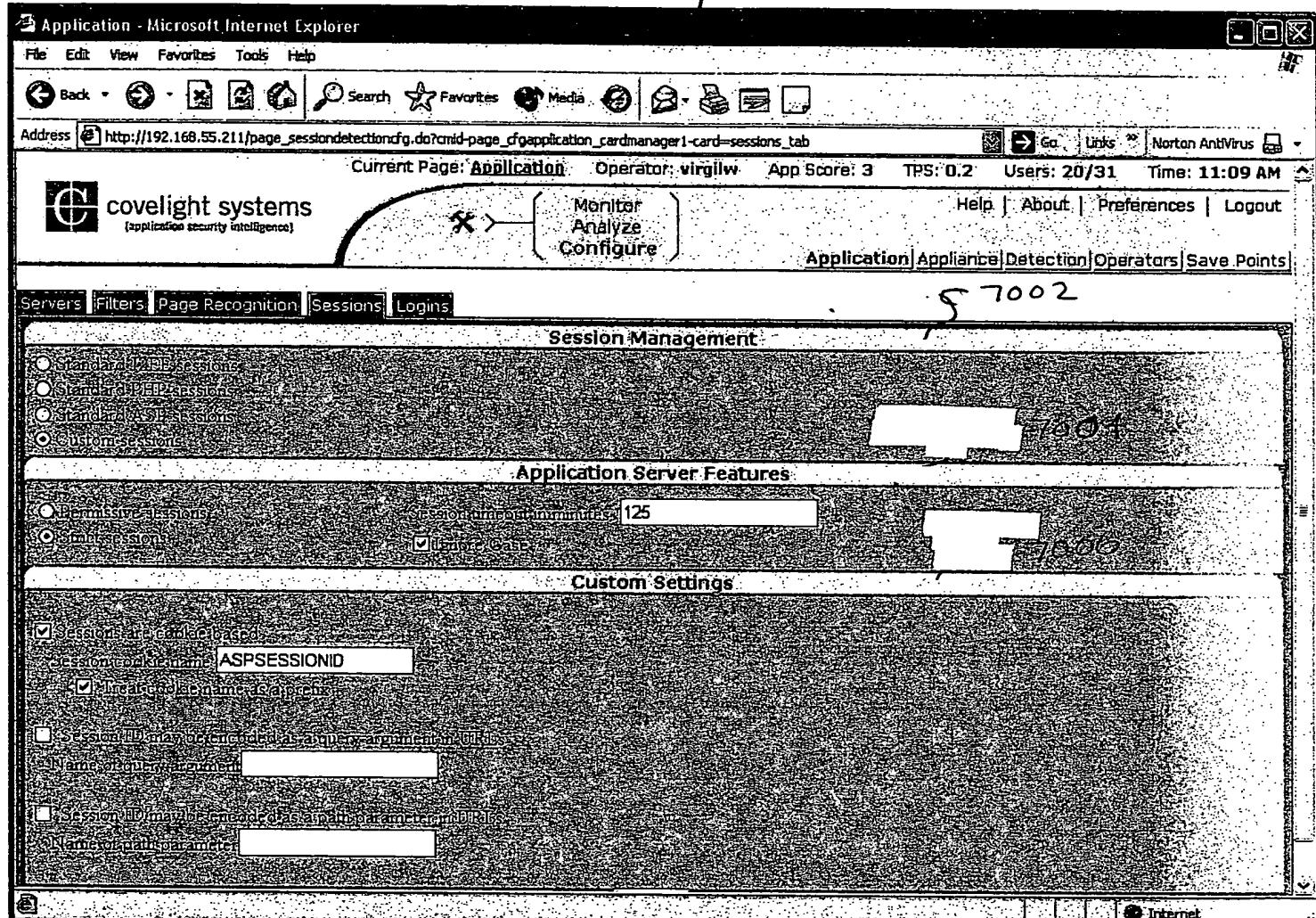


FIG. 60

6000

Application - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Favorites Media Go Links Norton AntiVirus

Address: http://192.168.55.211/page\_loginDetectioncfg.do?cmid=page\_cfgapplication\_cardmanager1-card=login\_tab

Current Page: Application Operator: virgilw App Score: 3 TPS: 0.2 Users: 20/31 Time: 11:10 AM

covelight systems (application security intelligence) Help About Preferences Logout

Application Appliance Detection Operators Save Points

Servers Filters Page Recognition Sessions Logins

Form Based Login Detection

Nonimased login

Use case-sensitive matches

URL: /auth/login.asp?txtUsername=&actionType=login

Form field containing user ID: txtUsername

Logout or Error link: [Logout](#)

URL for successful login actions: [/auth/loginSuccess](#)

Form Based Login Result

Fail if login form is present but not submitted

Fail if login response is not directed to the following URL pattern

Fail if response HTML contains the following pattern

Intercept login response parameters in the following URL pattern

Successful response HTML contains the following text

Successful response contains a cookie session

Update

6002

FIG. 61

6100

6102

Application - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Favorites Media

Address: http://192.168.55.211/main.do?nav=configuration

Go Links Norton AntiVirus

Current Page: Application Operator: virgilw App Score: 3 TPS: 0.1 Users: 20/31 Time: 11:02 AM

covelight systems (application security intelligence)

Monitor Analyze Configure

Help About Preferences Logout

Application Appliance Detection Operators Save Points

Servers Filters Page Recognition Sessions Logins

Server	Port	SSL Private Key
192.168.2.19	80	

Delete Server IP: Port: Key: Browse... password: Add

Internet

FIG. 62

Operators - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://192.168.55.211/main.do?page=page\\_cfgoperators](http://192.168.55.211/main.do?page=page_cfgoperators) Go Links Norton AntiVirus

Current Page: Operators Operator: virgilw App Score: 3 TPS: 0.1 Users: 20/31 Time: 11:02 AM

**covelight systems** (application security Intelligence)

Monitor Analyze Configure Help About Preferences Logout

Application Appliance Detection Operators Save Points

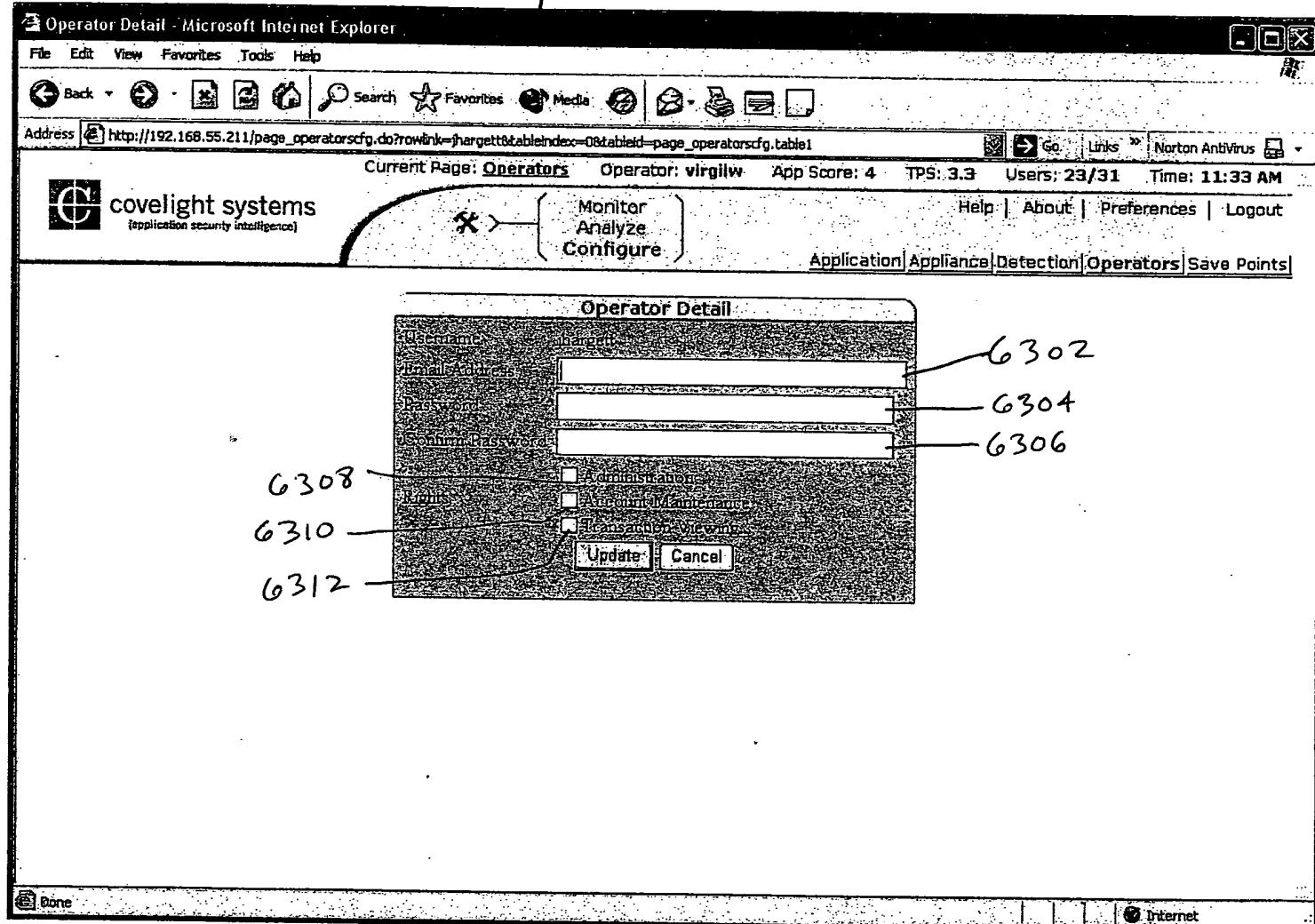
6204 6202 6206

Operator	Email Address
<input type="checkbox"/> jhargett	
<input type="checkbox"/> kgramley	
<input type="checkbox"/> dsinnott	
<input type="checkbox"/> dmdurrett	mdurrett@covelight.com
<input type="checkbox"/> tash1	tash1@notarealsite.com
<input type="checkbox"/> eschmidt	
<input type="checkbox"/> tash	tash@notarealsite.com
<input type="checkbox"/> virgilw	
<input type="checkbox"/> mcarman	mcarman@covelight.com
<input type="checkbox"/> dlogan	
<input type="checkbox"/> admin	

6208 6212 6210

FIG. 63

6300



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FIG. 64

6400

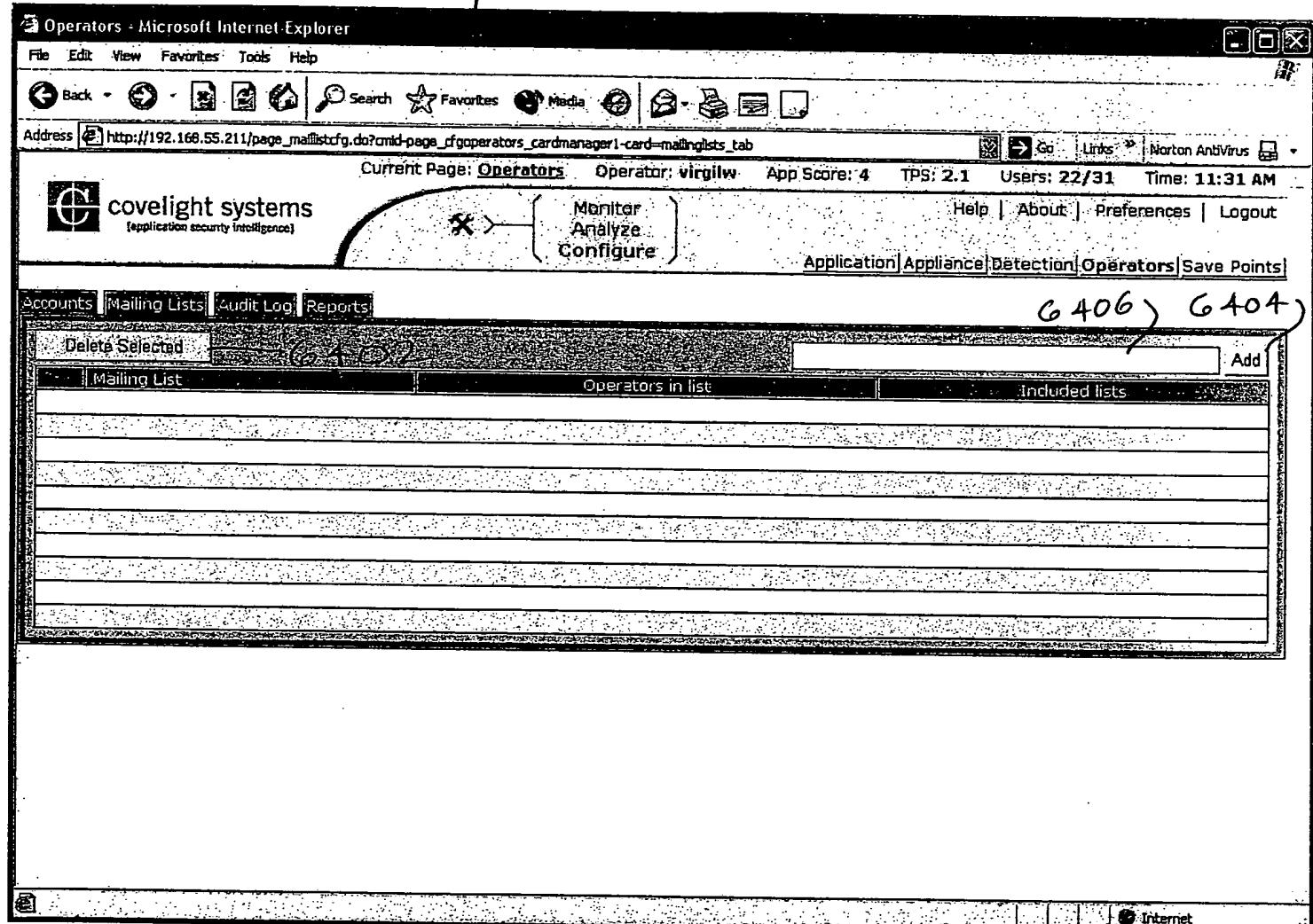


FIG. 65

6500

6512 6514

Operators - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: http://192.168.55.211/page\_operatorscfg.do?cmd=page\_fgoperators\_cardmanager1-card=auditlog\_tab

Current Page: Operators Operator: virgilw App Score: 4 TPS: 2.9 Users: 22/31 Time: 11:32 AM

covelight systems (application security intelligence)

Monitor Analyze Configure Help About Preferences Logout

Application Appliance Detection Operators Save Points

Accounts Mailing Lists Audit Log Reports

Refresh Export CSV Export XML

1 2 > >>

Date	Message	IP Address	Operator
1/16/04 11:28 AM	Login successful	192.168.55.101	virgilw
1/16/04 10:57 AM	Login successful	192.168.55.101	virgilw
1/16/04 10:11 AM	Changed operator virgilw refresh rate to 30	192.168.55.17	virgilw
1/16/04 10:11 AM	Changed operator virgilw refresh rate to 30	192.168.55.17	virgilw
1/16/04 9:30 AM	Login successful	192.168.55.17	virgilw
1/16/04 9:27 AM	Login successful	192.168.55.17	virgilw
1/16/04 9:26 AM	Login successful	65.81.86.237	dmdurrett
1/16/04 8:42 AM	Login successful	192.168.55.17	virgilw
1/16/04 8:47 AM	Logout successful	65.81.86.237	dmdurrett
1/16/04 8:17 AM	Login successful	65.81.86.237	dmdurrett
1/16/04 7:37 AM	Login successful	65.81.86.237	dmdurrett
1/15/04 7:34 PM	Login successful	192.168.55.101	virgilw
1/15/04 7:34 PM	Login denied for admin	192.168.55.101	?
1/15/04 7:14 PM	Login successful	192.168.55.101	virgilw
1/15/04 6:34 PM	Login successful	192.168.55.10	dmdurrett
1/15/04 6:04 PM	Login successful	69.132.60.166	jhargett
1/15/04 5:46 PM	Login successful	65.81.86.237	admin
1/15/04 5:27 PM	Login successful	192.168.55.10	dmdurrett

Internet

FIG. 66

6600

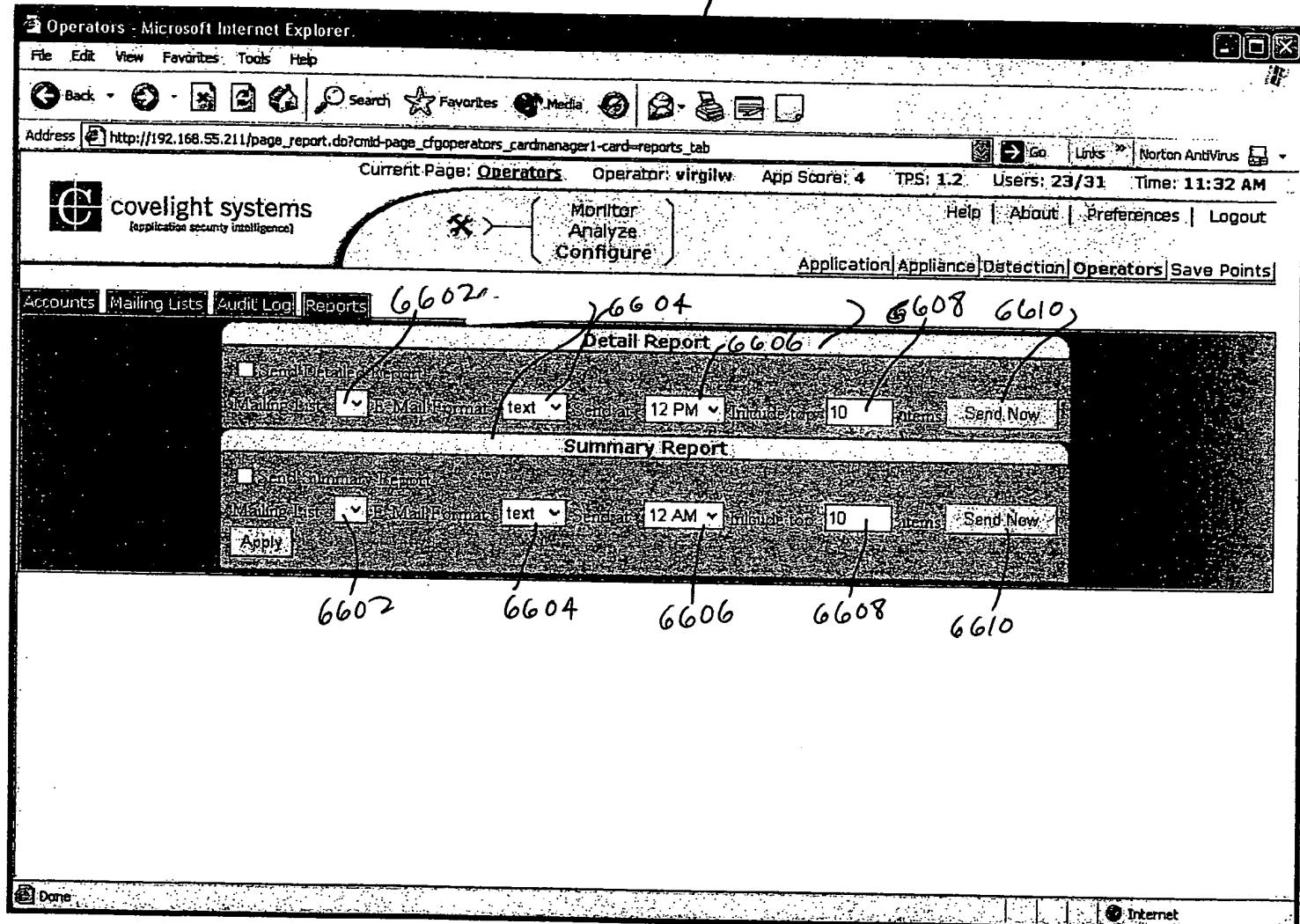


FIG. 67

6700

6700

Detection - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Media Stop Print

Address http://192.168.55.211/main.do?page=page\_cfgdetection

Current Page: Detection Operator: virgilw App Score: 3 TPS: 0.1 Users: 20/31 Time: 11:02 AM

Norton AntiVirus

covelight systems (application security intelligence)

Monitor Analyze Configure Help About Preferences Logout

Application Appliance Detection Operators Save Points

Detectors Global Scoring Adjustments Access Lists

Showing 1 to 49 of 49

Name	Category	Score	Status
Abnormal node error rate	Application Errors	10	Working
Abnormal session duration	Application Misuse	10	Learning
Abnormal user session duration	Application Misuse	10	Working
Application request rate too high	Usage Policy	10	Working
Consecutive login failures	Authentication	30	Working
Disallowed IP address	Access Policy	10	Disabled
Encoded 8-bit character	URL Encoding	5	Working
Excessive individual HTTP errors	HTTP Protocol	40	Working
Excessive login failures	Authentication	10	Learning
Excessive total HTTP errors	HTTP Protocol	40	Working
Flagged user login	Access Policy	50	Working
HTTP buffer overflow	HTTP Protocol	80	Working
HTTP parsing error	HTTP Protocol	80	Working
Invalid % character	URL Encoding	50	Working
Invalid HTTP request	HTTP Protocol	80	Working
Invalid URL encoding	URL Encoding	80	Working
Invalid UTF-8 sequence	URL Encoding	20	Working
Invalid use of %%	URL Encoding	60	Working

6702 6704 6706 6708

Internet

FIG. 68

6800

6802

6804

6806

6808

6810

6812

**Detector Detail - Microsoft Internet Explorer**

File Edit View Favorites Tools Help

Address: http://192.168.55.211/page\_detectors.do?rowlink=rate1%5C&tableIndex=3&tableId=page\_detectors\_detectorTable

Current Page: Detection / Detector Detail Operator: virgilw App Score: 4 TPS: 0.4 Users: 23/31 Time: 11:37 AM

Norton AntiVirus

covelight systems (application security intelligence)

Monitor Analyze Configure

Help | About | Preferences | Logout

Application | Appliance | Detection | Operators | Save Points

**Detector Detail**

Name: Application Throughput Sensor

Description: Detects when the overall rate of HTTP requests to the application is too high. The sensor takes samples of the transaction-per-second (TPS) throughput of the monitored application. When the value is higher than expected, it might suggest that an attack is progress or that a user is trying to overload the application.

Status: Enabled

Event Index: Application throughput (TPS) is too high

Threshold: 70

E-mail Alerts

Send Email Alerts:  To: No distribution lists are defined

Detector Tuning

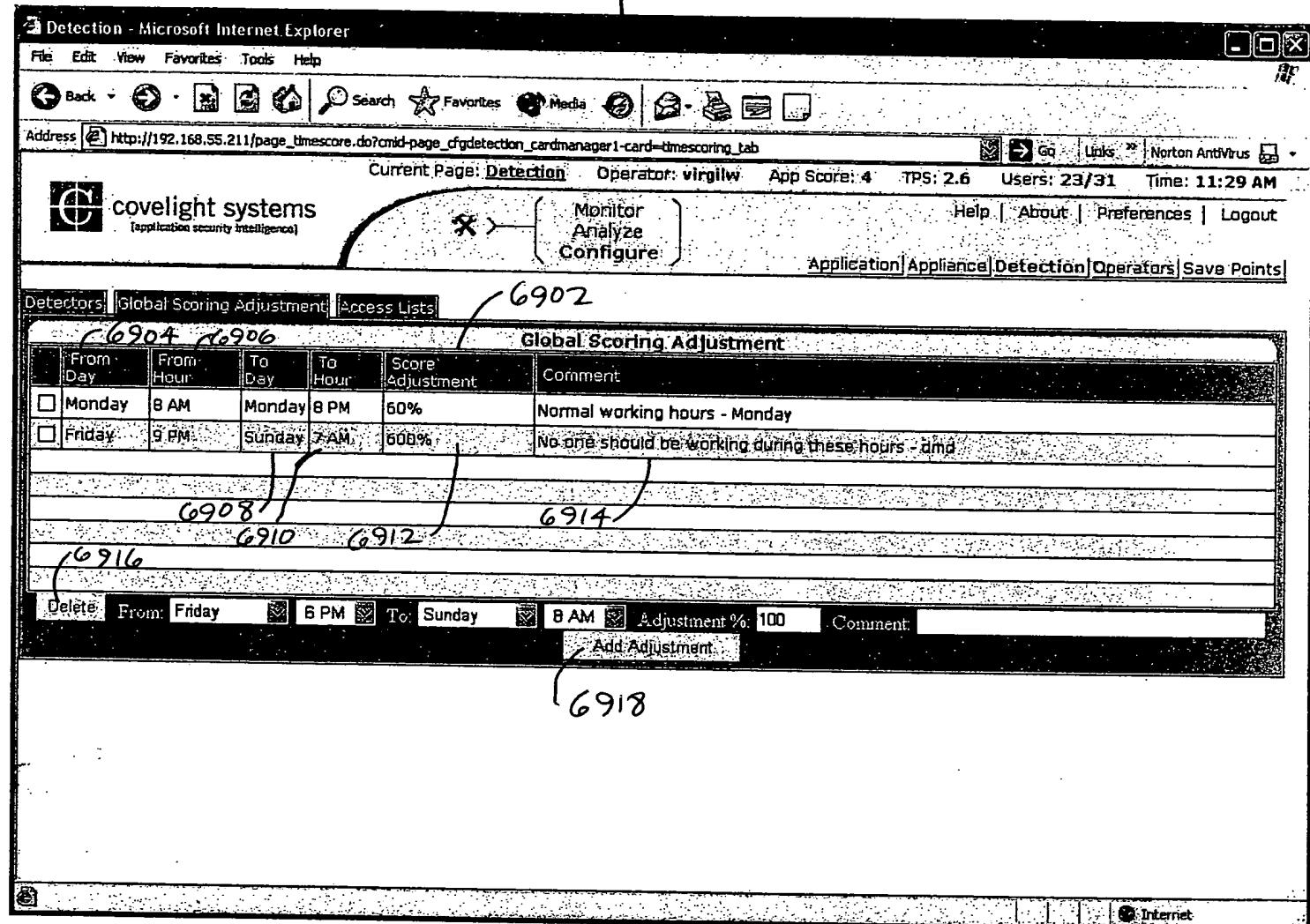
Detector Tuning: 1000

Apply

Done Internet

FIG. 69

6900

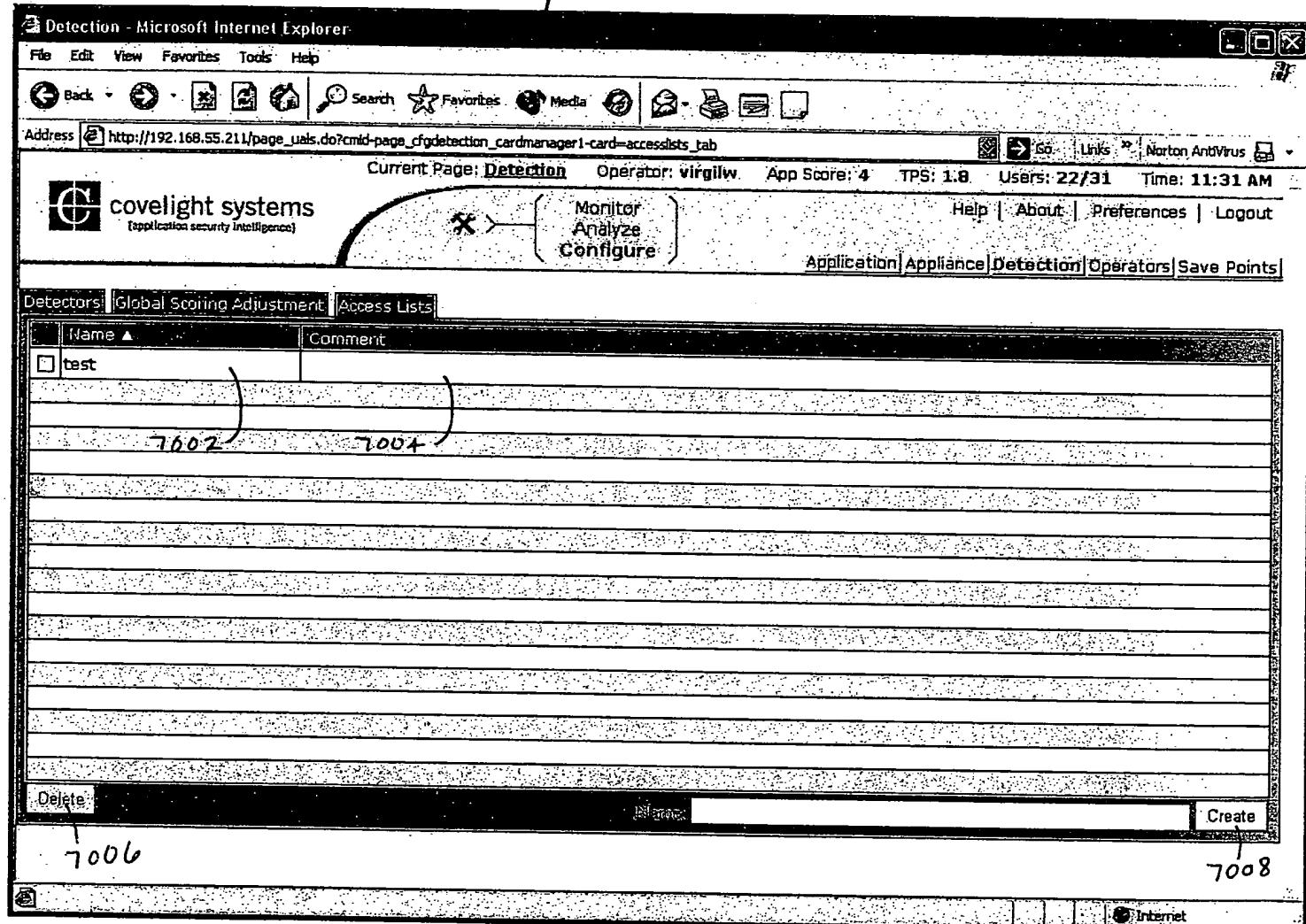


**Title: METHODS, SYSTEMS AND COMPUTER  
PROGRAM PRODUCTS FOR  
MONITORING PROTOCOL RESPONSES  
FOR A SERVER APPLICATION**

Atty Docket: 1503/9

FIG. 70

7000



Title: METHODS, SYSTEMS AND COMPUTER  
PROGRAM PRODUCTS FOR  
MONITORING PROTOCOL RESPONSES  
FOR A SERVER APPLICATION

Atty Docket: 1503/9

FIG. 71

